

WHITE SLAVES OUR AMAZING BLOOD 'ANCIENT' PLANTS

CREATION

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NUCLEAR PHYSICIST EMBRACES CREATION

Dr James Mason discusses why radiometric dating doesn't work, and how science supports a young earth

SUPERNATURAL LAW

Why miracles and science are not mutually exclusive

PRECAMBRIAN POLLEN

A billion years before plants?

HOW DO SEA TURTLES KNOW WHERE TO GO?

Long-distance loggerheads defy evolution with their astonishing sense of direction



In this issue



Cover

The loggerhead turtle (*Caretta caretta*) is renowned for its long-distance migrations across vast oceans with pin-point navigational accuracy.

See pp. 28–31.

Cover photo: © Gary Bell/Oceanwideimages.com

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WHALE EVOLUTION

SCIENCE OR SPECULATION?

Drawings showing animals developing a whale's tail and flippers come from the imagination, not from the fossils.

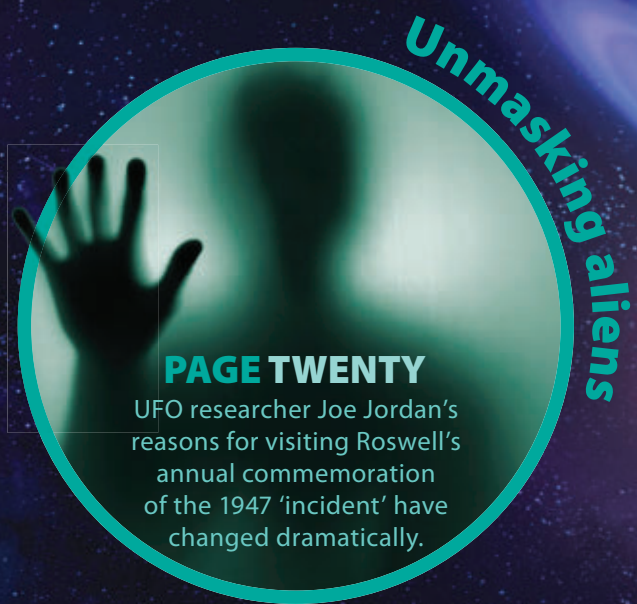
page fifty-four



High-tech jellies

Medical researchers aren't the only ones 'captivated' by jellyfish movement.

FEATURES



PAGE TWENTY

UFO researcher Joe Jordan's reasons for visiting Roswell's annual commemoration of the 1947 'incident' have changed dramatically.

page forty four

YOUNG SATURN

Probe upsets billion-year beliefs.

PAGE THIRTY-FIVE THE 'AGE OF DINOSAURS'

It never really happened.





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All care is taken to ensure that *Creation*
magazine presents an accurate and
consistent view of biblical creation, but
the views expressed in the magazine are
those of the writers, and not necessarily
those of the editors or of the directors of
Creation Ministries International.

FEEDBACK

Letters may be edited for clarity and brevity. If emailing
letters (to: Editors@creation.info) please include street
address and phone number.



Bizarre brainwashing behaviour

Re M. Leblanc's letter (33(2),
p. 4): his attitude is so typical
of the kind of thinking that
the French higher education
system produces. The State
system ruthlessly excludes
any discussion of Creation
or I.D.

One pastor I know
was berated by his son's
teacher for daring to teach
his boy about Creation and
by extension God. I do not
overstate the point when I
say that the authorities are
paranoid about the rise of
'creationism' in Europe,
and in particular France.
Leblanc's rant perfectly
shows the rank ignorance that
exists here in Europe between
what creation is and evolution
is not. I think that in other
times one would conclude
that the gentleman had
been the victim of a sinister
brainwashing. Nowadays,
this bizarre behaviour is the
new normal.

Patrick Clarke
France

High praise!

I just received my *Creation*
33(2) and wanted to let you
know how outstanding I
think the design work is.
The titles are so creative and
the layouts are just delicious,
unique, rich and interesting.
Most importantly, the text is
still perfectly readable. Well
done! My compliments to all
the designers involved with
Creation magazine, and the
website for that matter. From
a design point of view, I think
CMI is going from strength
to strength. Well done!

And I hope the excellent
resources you produce will
attract the eyes of unbelievers
and Christians who are on
the fence about creation and
evolution. CMI is making a
difference. Keep up the great
work.

Amanda Greenslade,
Australia

*Thanks, Amanda. That
means a lot to us (Amanda
was leader of the graphic
design team at CMI for a
couple of years.)*

"Creation magazine ... changed my life"

I have been a subscriber
to *Creation* since the early
90s and it has helped me
climb from a life in hotels
where I was involved in and
saw the worst of life. I can't
remember how my first copy
came into my hands, but it
certainly changed my life.
Thank you.

David B.
Australia

In Poland

Thank you for your very fine
magazine! Am sharing it
here in Poland with friends.
Thank you for it being so
fundamental!!! (who said
that fundamental needs to
be bigoted and intolerant?).
May God richly bless your
ministry, in **our** work of
telling/sharing with others
the fundamental necessities
of Christianity

Zygmunt Jastkowiak
Poland



Trusting the Bible?

You've done it again—another
stunning publication.

It's too bad Jonathan
Sarfati found it necessary to
quote William Lane Craig
in his otherwise excellent
article, "*Should We Trust
The Bible?*" Craig is either
dishonest or blind to the truth
when he states that the world
is billions of years old and
that the Bible has nothing
to say about the age of the
earth (Craig says this in a
YouTube video titled "Age
of the universe").

Donald Wulff
Canada

*Dr Sarfati: As shown in my
book Refuting Compromise,
I am well aware of Craig's*

Newton irony

I am twelve and, even though I am
Afrikaans-speaking and *Creation* magazine
is in English, I've been reading its children's
column since I was about eight. Today
I devour the entire magazine, which
contributes greatly to my knowledge of
English and science. Last year I translated
the *Seven C's of History* into Afrikaans for
CMI South Africa—with some help from
my mom. Earlier this year my brother and

I bought the Afrikaans translation of *Can
you feel the force?*, a book about physics.
On Sir Isaac Newton, it says that he
"incorrectly" calculated the year
in which the creation took place
as 3,500 BC which is "out
by about 4.5 billion years".
Wow! How brilliantly clever
Newton was 300 years ago!

Louis Cloete
South Africa





Flightless feathered friends



About a week before reading "The Colourful Cassowary" (*Creation* 33(1):20-23) I finished a school report on flightless birds. While I searched for information on ratites (large flightless birds) I had to wade through a lot of evolutionary material on how these birds came to be.

I wanted to find out the Christian view about these birds (if they were created without flight or if natural selection played a part in this process). I did a little research online but I ran out of time and I had to turn the report in without any information on their origin or

how they got where they are today.

I was so excited to read the article which answers all the questions I had on these amazing birds.

Thanks and keep up the good work!!

Timothy Pierce
New York, U.S.A.

Another reader asked why God could not have created flightless birds, to which Dr David Catchpoole responds:

Mutant offspring are an observable feature of the fallen world—it makes sense that flightlessness of New Zealand's feathered inhabitants arose after their ancestors had arrived there post-Flood. Otherwise, with the absence of Ice Age land bridges to New Zealand, one has to consider how did flightless birds get there, yet no mammals or snakes? Post-arrival flightlessness makes much more sense.

old-earth compromise. I was citing him for his expertise in New Testament scholarship, and the points still stand, despite his glaring blind spot about Genesis.

Be encouraged!

Be very encouraged. What you and your organisation and team are doing is simply excellent. You write with wisdom, knowledge of the Word and a sound, analytical mind that does you and yours credit. I have subscribed my father to your mags (which he loves). He is an engineer and mathematician and a man of God. He has taught all us kids in the how/whys/whos/whens of this world and science and the mightiness of the living God ... reading your magazine is a great encouragement to him, as I hope this email is to you!

Keep up the awesome work. Keep running that race. You will never know how many lives and minds you are changing and affecting. May the Lord bless your socks off!

Jess Macdonald,
Australia



Youth need answers!

Your magazines are very good and I find them encouraging. I don't know how anyone could deny God. In one of your recent copies (32(4)), the editorial is "Why is the church losing its young people?" (It) was, as a young person myself, something I totally agreed with. We kids aren't given enough answers! I think that churches should preach creation just like it preaches other things. Really, evolution is just a false religion isn't it? So keep it up—tell the truth to all and do what God has asked! (Matthew 24:11-14)

Fiona Brown,
England
(Fiona is 12 years old)

Second generation creation evangelist!

You and your ministry have been a blessing to myself and my family with my parents subscribing since I was very young. I now serve in the RAAF and really enjoy sharing your magazines with my co-workers. As I am currently on posting to complete an undergraduate university degree, the background I have from long exposure to your ministry has led to many interested questions from my mates, one of whom came to find me after a creation/evolution



Redbacks and red faces!

Oops! In *Creation* 33(2), p. 34, in the article on spider webs, artistic licence undid us. A reader pointed out that a redback/black widow spider (pictured near the web) does not build orb webs. Somehow that sneaked through the checking process!

Another reader noticed that the rainbow in the picture of Noah's Ark (*Creation* 33(1) 28-31) had the colours in the reverse order. This was in the beautiful artwork supplied by the people responsible for the Hong Kong Noah's Ark.

discussion because he was amazed to meet someone who actually believed in creation and had evidence for it.

Claire Fletcher
Australia

Shock treatment needed?

I would like to address those of your readers who believe the subject of Creation is merely a "side issue". All you need to do is visit YouTube and search for "Creationist" or "Creationism"—choose any video with a large view count (some are in the millions), and take a look at the steady stream of venom and hatred being spewed in the comments. Your eyes will surely be opened; and the number of woefully underprepared 'religious' folks offering their weak rebuttals will become apparent as well. If this doesn't shock you into action, I can't imagine what else is required.

Fred Reiland
Michigan, USA

THE 'VITAL MISSION' FOR ATHEISTS: DISCREDITING THE SUPERNATURAL



Original photograph ©iStockPhoto.com/TriggerPhoto

SPEAKING OF false prophets, Jesus warned his disciples, “You shall know them by their fruits.” (Matthew 7:16)

Hence my dismay when certain church leaders say that Charles Darwin’s evolutionary ideas do not challenge Christianity. Are they not aware of the tragic fruits of Darwin’s writings?

University of Chicago evolutionary biologist Jerry Coyne observed that the impact of *Origin of Species* was such that Darwin “in the end so convinced his readers that they not only bought his ideas, but in the process jettisoned three thousand years [sic] of religious explanation for life and its apparent design.”¹

Cambridge University evolutionist Simon Conway Morris agrees that *Origin* puts paid to biblical creation, and that Darwin knew what he was doing:

“First and foremost, *The Origin* is an exorcism of the doctrine of special creation, and conducted by one of the most skilled exorcists science has ever seen.”¹

Look why Yale University evolutionists Ira Mellman and Graham Warren sing the praises of evolutionary theory ...

“The greatest scientific advance of the last 1,000 years was providing the evidence to prove that human beings are independent agents whose lives on earth

are neither conferred nor controlled by celestial forces.”²

... and:

“Although it may be more conventional to measure scientific progress in terms of specific technological developments, *nothing was more important than providing the means to release men and women from the hegemony of the supernatural.*”² (Emphasis added.)

Those are fighting words, denying that we are here for a purpose—to humbly love and serve our Creator, who is Spirit (Mark 12:30, John 4:24).

Jesus made it clear that one is either *for* or *against* Him (Matthew 12:30)—so no-one, including atheists, is truly ‘neutral’. Thus, atheists’ gloating over evolutionary theory’s challenge to the church should not be surprising.

What’s more, their *passion* and

sense of purpose in proclaiming evolution (e.g. the billboard pictured) ought to be a wake-up call to church leaders who see no problem with Darwin’s ideas. Cambridge University evolutionist Peter Lawrence’s words are singularly revealing:

“In this **vital mission to discredit**

the supernatural, nothing has proved more important than *The Origin of Species*.”¹ (Emphasis added.)

Indeed. What better way to discredit Christ as Creator³ (and therefore Lord and Saviour) than by denying supernatural creation itself.⁴ Christians therefore have a *vital mission* to overturn the atheists’ ‘vital mission’—hopefully winning them

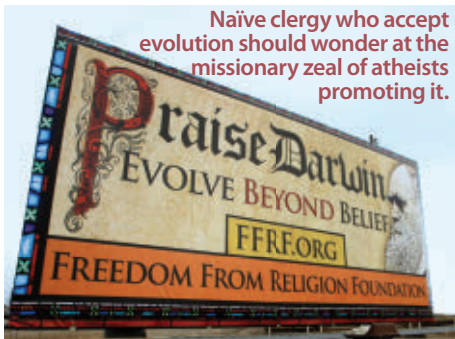
over in the process, that they might give due credit to their Creator, rather than trying to *discredit* Him. That’s what this magazine is all about.

No atheist could logically refute Gordon Howard’s arguments defending the supernatural (p. 32), for example. And check out our other features covering geology (e.g. pollen grains in supposedly ‘too old’ rock—p. 16), paleontology (yet another ‘living fossil’—p. 23), biology and design (especially Dr Andrew Hodge’s “The Life is in the Blood”—p. 12), anthropology (the ‘ape-men’ demolition beginning on p. 24 is actually intended for *all* readers) and cosmology (David Coppedge beautifully highlights the Saturn age problems for evolutionists—p. 44). These articles are written specifically to give anyone professing belief in evolution, and denying divine design, reason to think again.

So, please, pass this information on to those who need to hear. The true *vital mission* field is huge. And the need is urgent. ■

References and notes

1. This was part of his response when approached (along with 10 other modern-day scientists) for his assessment of Darwin’s *Origin* in the 150th year of publication. (Re)Reading *The Origin*, *Current Biology* 19(3):R96–R104, 2009.
2. Mellman, I. and Warren, G., The road taken: past and future foundations of membrane traffic. *Cell* 100, 99–112, 2000.
3. John 1:3, Colossians 1:16; see also creation.com/trinity, creation.com/incarnation.
4. Especially Genesis creation, with its history of the origin of sin and death—the very reason for the gospel. See creation.com/goodnews, creation.com/seedbed and creation.com/nt.



Yeti research institute?

Russian officials have announced plans for a scientific research institute to study the yeti (also known as the 'abominable snowman').

Although the hairy ape-like creatures of popular myth are generally held to inhabit the Himalayas, some researchers believe the remote Russian mountains of western Siberia could also harbour a population of yetis.

"We think the yeti is a separate branch of human evolution. It lives in harmony with nature," said yeti researcher Igor Burtsev.

Ideas that there are living apemen such as the yeti and 'bigfoot' are fuelled by evolutionary notions of ape-men in the past. But people have always been people, and apes have always been apes. (And in any case, one wonders what a yeti researcher will actually study, given that even if yeti 'sightings' were based on an actual creature, no specimens—living or dead—are available!)

Siberia plans yeti research institute, *ABC News*, www.abc.net.au, 24 March 2011.

Renewable energy from hornets?

The humble hornet is turning out to be more complex than anyone ever imagined. Scientists from Tel Aviv University have discovered that the Oriental Hornet can generate electricity from the sun.

They found that the yellow and brown stripes on the hornet's abdomen produce a photo-voltaic effect. What happens is that the brown shell has grooves in it that split sunlight into diverging beams. The yellow stripe has pinhole depressions in it containing a pigment called xanthopterin. The pinholes trap the light and the pigment converts the light into electricity. Scientists are now looking into ways of developing a renewable source of energy by learning from the hornet.

There seems no end to these new and astonishing discoveries

as man is learning that the creation is much more complex than evolutionists might have ever imagined—testimony to the wisdom and power of the Creator. See also creation.com/biomimetics for many more examples.

Is the hornet our key to renewable energy?, renewableenergyworld.com, 7 January 2011.



©iStockPhoto.com/Pannonia

There are millions of mammoth remains preserved in the frozen soil (tundra) of Alaska, Canada and Russia. Though one occasionally finds frozen soft tissue, even the rare entire carcass, mostly these remains are bones and tusks.

Thanks to the work of Mike Oard, the foremost creationist researcher on Ice Age issues, it has been clear for some time now that the mammoth remains would have been deposited near the end of the post-Flood Ice Age. (For more information see

creation.com/riddle, creation.com/snapfreeze, also *The Mammoth and the Ice Age* DVD presentation by Michael Oard on creation.com/store.)

Mammoth tusks are often so fresh that they can be used as a substitute for elephant ivory. The recent global ban on elephant ivory to combat illegal poaching has led to an increase in demand for mammoth ivory, which commands a higher price than that from modern elephants. Russia now exports 60 tonnes of mammoth ivory per year to China and this looks set to escalate.

In related news, Grant Zazula, a government

paleontologist in Canada's icy Yukon Territory, is supplying mammoth bone to researchers in his own country who are hunting for clues to bone diseases such as osteoporosis. Osteoclasts, cells which break down bone in the normal remodelling process, are more visible in mammoth bone. Zazula also supplies European researchers battling food fraud; gelatin from mammoth bone, though similar to that from other animals, will never be found in modern food. So it can be used as a baseline to detect mislabelling or adulteration of meat products.

Mammoths heading a roaring trade in ivory, theage.com.au, 28 September 2010. Woolly mammoth remains find modern uses, cbc.ca/news/, 3 January 2011.

Mammoth issues in the news

Mice grow younger in genetic rejuvenation

Scientists at Harvard University have induced a rapid aging process in mice, then reversed it again, by switching off then activating the enzyme telomerase. This has to do with the 'aging clock' at the ends of the chromosomes.

This is highly relevant to the whole matter of how humans were able to live for 900 years before the Flood, and why longevity dropped, as we showed in a 1998 article (*Creation* 20(4):10–13, creation.com/900). This report strongly reinforces our conclusions, which indicated that a changed atmosphere, e.g., could not have been

the reason for the post-Flood decline in lifespans. (If it were, why did a 600-year-old Noah live for another 350 years in this allegedly unfavourable new world? See also *Journal of Creation* 8(2):138–141, 1994, creation.com/lifespan; 24(3):46–53, 2010.)

The results in the mice were dramatic, the equivalent of an 80-year-old human progressively becoming like a 25-year-old again in all physical aspects. In humans, unchecked activity of telomerase (which controls cell multiplication) would make us prone to widespread cancer. The bottom line is that the control of aging is largely genetic, and humans living to much greater ages is not some 'primitive mythology' as is often alleged.

Harvard team successfully reverses the aging process in mice, www.gizmag.com, 29 November 2010.

Human teeth in Israel raise long-age eyebrows

Archaeologists claim to have found teeth in a cave in central Israel which are the oldest evidence of modern man. The teeth, which were also examined with X-rays and CT scans, were found in layers which 'date' to 400,000 years. Avi Gopher, an archaeologist from Tel Aviv university, has concluded that they are identical to those of today's *Homo sapiens*, calling this "exciting".

To those who accept the long-age dating methods, the conclusion that the teeth are human is unwelcome and hence is being resisted. To evolutionists, it upsets today's prominent 'out of Africa' theory of human evolution, which says that all modern humans outside of Africa are from a much later (c. 200,000 years ago or less) migration that 'replaced' other humans like Neanderthals.

Long-age or 'progressive' creationists (who believe in vast ages before Adam) likewise cannot have descendants of Adam living such a long time ago. In their scheme of things, only spiritless non-humans that look like humans could have existed then, so this is how they regard the Neanderthals. For them, such a conclusion would represent one more problem to add to the DNA analyses of Neanderthal human remains. These have conclusively shown that they interbred with 'modern' human groups and hence are the same created kind (see also creation.com/neandergenes).

Dr Gopher is confident of finding more remains of the human inhabitants in the cave, including skulls and bones that would help silence doubters.

Researchers: Ancient human remains found in Israel, news.yahoo.com, 27 December 2010.

Dino date collides with impact theory

A dinosaur bone, the femur of a hadrosaur, was 'dated' using a new application of the U-Pb radiometric method, hailed as being able to give it an absolute age. The calculated result of 64.8 million years ago caused headlines around the world. This is because it would mean the creature was alive some 700,000 years *after* the time when a giant meteorite impact was supposed to have caused such environmental havoc as to wipe out the dinosaurs.

This theory, bolstered by Hollywood, still grips the popular imagination, though even many evolutionists have raised doubts for years. For example, we reported as far back as 2004 (see

creation.com/dino-impact) that the 'date' of the crater and of the extinctions it was supposed to have caused differed by a 'mere' 300,000 years.

Of course, both the evidence interpreted as a 'time of extinction' and the dating methods rely on long-age assumptions. So it is no surprise that the more data comes in, the less coherence there is between the two. This is because long ages are an untenable belief, being based on a rejection of the global Flood described in Genesis (2 Peter 3:3–6). See also p. 35 this issue.

Test shows dinosaurs survived mass extinction by 700,000 years, www.research.ualberta.ca, 27 January 2011.

Expelled from NASA

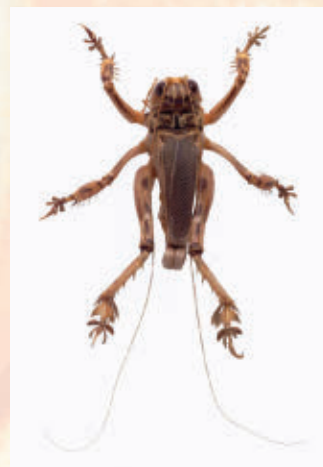
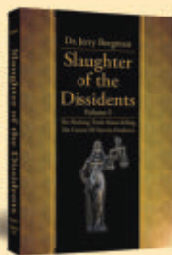


Ben Stein's landmark documentary *Expelled* and Dr Jerry Bergman's book *Slaughter of the Dissidents* (both available via creation.com/store) present numerous examples of creationists being excluded from academic and research positions because of their opposition to evolution.

Now evolutionists have claimed yet another prize scalp—this time it's leading creationist David Coppedge (see his article p. 44 this issue). NASA's Jet Propulsion Laboratory (JPL) fired him earlier this year, after nearly 14 years of stellar service. JPL says Coppedge's termination resulted from budgetary constraints/downsizing, but his dismissal came after he'd filed a lawsuit against his employer, alleging discrimination because JPL had sought to gag him from talking about the creation-evolution issue with co-workers.

David Coppedge was the most senior member of the team that oversees the computers on NASA and JPL's Cassini Mission to Saturn—that doesn't seem at all like the first staff member who would be forced to leave in a downsizing situation.

NASA's Jet Propulsion Lab fires Cassini Mission Senior Computer Admin who filed discrimination lawsuit, www.evolutionnews.org, 25 January 2011.



Cricket didn't change in 100 million years of evolution?

The splay-footed cricket genus *Schizodactylus* has exhibited what evolutionists call *evolutionary stasis* for “at least the last 100 million years”. Note the similarity between fossil (left photo) and living (right) specimens. But it's no problem for creationists, as this issue's 'living fossil' article on p. 23 explains. (See also creation.com/stasis.) Note, too, the degree of detail preserved in the fossil specimen—consistent with *rapid* burial in an event only thousands of years ago (Genesis 6–9), not millions.

Rare insect fossil reveals 100 million years of evolutionary stasis, news.illinois.edu, 3 February 2011.

Yet another failure of evolutionary theory

Based on the idea that fruitflies evolved from non-flies and even non-insects, evolutionists supposed that 'old' genes (those shared with non-flies) would be more important than 'new' genes (those only in flies).

So they inactivated one gene at a time in flies to find which ones were essential.

Much to their surprise, the 'old' and 'new' genes were equally important—about 1/3 of all inactivated genes caused death. Without evolutionary assumptions there would be no reason to suppose that genes shared with other creatures (they had the same Creator)

would be more important to the flies than genes that are peculiar to flies. This has implications for medical research. Based on the same faulty evolutionary reasoning, scientists have assumed that humans share all the really important genes with mice, so that experiments on mice would be a fine indicator of human responses.

Age doesn't matter: New genes are as essential as ancient ones, www.sciencedaily.com, 16 December 2010.





A flick of the tail

Engineers have dramatically improved the acceleration of their ‘mechanical fish’ robots by emulating the physics behind the pike fish’s ability to rapidly accelerate from a stationary start.

They constructed 50-cm-long rubber models of fish with an internal mechanism designed to ‘flick’ the model’s tail

in the same way as a pike does. This resulted in an underwater acceleration of 4 g, which was eight times better than that of previous robotic fish. But they’ve got a way to go yet to match the top recorded acceleration of real pike, 15 g.

As *New Scientist* mused, “A robot with that kind of acceleration could be well suited to covert operations or navigating turbulent water.”

Robofish is quick off the mark, *New Scientist* 208(2785):21, 6 November 2010.

It’s life ... whoops, no it isn’t!

For the last 20 years it has been believed by some scientists that tiny branching structures in rocks of the (allegedly) 3.5-billion-year-old Apex Chert rock of Western Australia were fossilized bacteria. However, it has recently been shown that these filament structures are not remnants of life at all, but are simply tiny fractures in the rock filled with the minerals hematite and quartz.

University of Oxford palaeobiologist Martin Brasier criticised previous researchers who “ignored the obvious” in their eagerness to equate the branching

filaments with early life. “There is a willful blindness about these structures that sometimes has more to do with local politics than global truth,” he said.

Kansas University researcher Craig Marshall drew a parallel between the Apex Chert saga and announcements about Martian life. “If we’re having problems here with ancient Earth sediments and there’s a huge debate, we want to try and be more stringent with our analytic techniques. We don’t want a repeat of the announcement in 1996 that, ‘Wow, we found life on Mars.’ I can’t recall the timeframe of how

many days or weeks until they said, ‘Well, maybe we haven’t.’”

However, note that although the latest study ruled out the filaments being fossilized life forms, it also found “an intriguing detail” in the surrounding rock, namely, carbonaceous material—which could be of biological origin. If it is, we can expect ongoing controversy about the Western Australian chert fossils, given the pressure such ‘3.5-billion-year-old biological evidence’ puts on evolutionary origin-of-life theories—see creation.com/early-life-controversy.)

Sadly, assuming there was sufficient carbonaceous material to do a carbon-14

analysis, evolutionists would not bother, as they presume that the rock’s supposed age rules out any carbon-14 still being present. But carbon-14 could indeed be there (just like in supposed billions-of-years old diamonds—see creation.com/diamonds) because the rocks, in common with rocks all over the world, are actually only thousands of years old.

In stark contrast to evolutionists’ beliefs, there is an Author of Life (Acts 3:15), and His Word *never changes* (Hebrews 13:8).

Filamentous figments in the Apex Cherts, nature.com/news, 20 February, 2011.

Research overturns oldest evidence of life on Earth, www.physorg.com, 16 March 2011.

More veggie dinos than ever

Predators like *T. rex* and *Velociraptor* belong to the suborder Theropoda, which was long supposed to be largely, if not exclusively, carnivorous. A recent study by Lindsay Zanno and Peter Mackovicky of the Chicago Field Museum has overturned this notion. Examining 90 ‘species’ of theropods, using such methods as analyzing fossilized dung, they found that nearly half of them were vegetarian. This included

ornithomimosaurs, therizinosaurs, oviraptorosaurs, alvarezauroids, and one of the troodontids.

Dr Zanno says that theropods are mostly “clearly adapted to a predatory lifestyle”, so she assumes that the ones that ate plants started off as carnivores, then “went soft” in their later evolution. However, another and perhaps more straightforward way of looking at this is that, clearly, large numbers of types of dinosaurs that look designed to be carnivores are not that at all. This is very supportive of the Genesis teaching that originally, all creatures ate plants. Some later must have turned to carnivory. For more on this, see creation.com/veg-dinos.

Another blow to the status of dino carnivores comes through the famous Lark Quarry footprints near Winton, Queensland, having recently been reassessed. For 30 years it had been

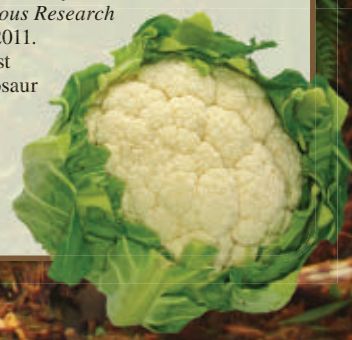
assumed and taught that they represented around 150 small dinosaurs being stampeded as they were chased by a large carnivore. However, the prints of the ‘carnivore’ have now been shown to be those of a large ornithomimid—a plant-eater.

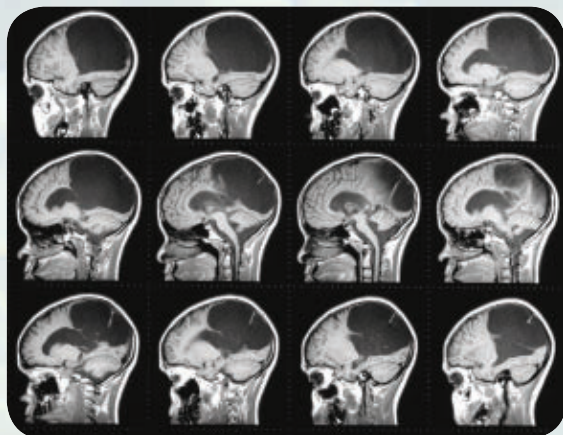
Most dinosaurs were vegetarian, research suggests, www.telegraph.co.uk, 21 December 2010.

Villain a vegetarian, www.theage.com.au, 18 December 2010.

A reassessment of large theropod dinosaur tracks ... of Lark Quarry: A case for mistaken identity, *Cretaceous Research* 32(2):135–142, 2011.

Australia’s largest carnivorous dinosaur forced to take a walk, www.uq.edu.au, 16 December 2010.





MRI ©iStockPhoto.com/DeanAustinPhotography

Amazing new brain facts

A study by Stanford University researchers using new imaging techniques has announced stunning results. Stephen Smith, the study's senior author, is cited as claiming that they had found that the brain's complexity is beyond anything they'd imagined, "almost to the point of being beyond belief". In our cerebral cortex alone, it turns out that there are over 125 trillion synapses. That's "about how many stars fill 1,500 Milky Way galaxies". Each one of these connections also functions like a microprocessor. Each synapse in turn, it is now clear, contains about 1,000 molecular switches of its own. The conclusion? "A single human brain has more switches than all the computers and routers and Internet connections on Earth."

The more we find out about the intricacies of creation, the more unlikely it is that it is all the result of natural processes, with no designing intelligence.

Human brain has more switches than all computers on Earth, news.cnet.com, 17 November 2010.

Humpback whale flipper inspires fan design

We have previously reported on the unusual bumps (tubercles) on the humpback whale flipper. They turn out to improve lift by 8% and reduce drag by an amazing 32% (*Creation* 27(2):56, 2005; creation.com/fighty-flippers).

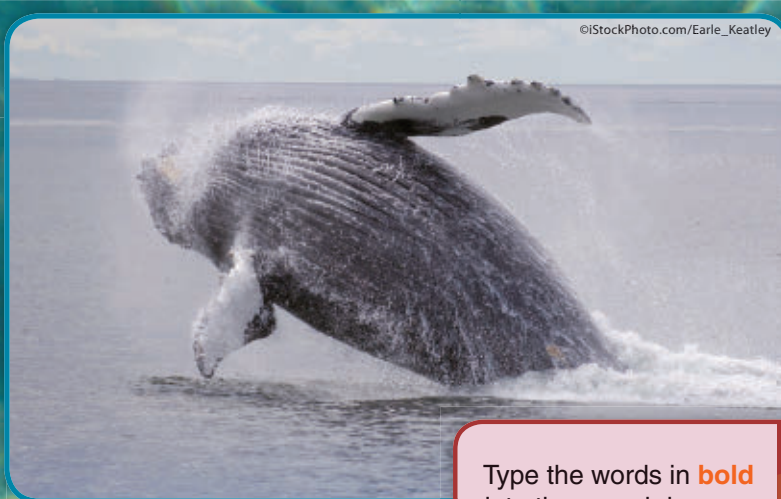
This is because the fluid is channelled through the narrower space between the bumps, which increases speed (Venturi Effect) and drops the pressure (Bernoulli Effect). This also generates eddies which increase lift. This means that the flipper can be slanted much more—a higher angle of attack—before stalling.

Now the company WhalePower has copied the Creator's flipper design to make much more efficient turbines and fans.

Its wind turbine generated 20% more power, because its blades could be angled more steeply than those on a conventional turbine (31° instead of 15°). It could also work at lower wind speeds. And its industrial ceiling fans moved 20% more air with fewer blades and a slower speed, saving 20% of energy costs.

If such a fan design were installed to cool computers, it could likewise result in huge energy savings. In the USA alone, computers and servers consume 5% of the country's total electrical energy output, or about 50 million megawatt-hours—60% of which is for fans and ventilation systems. Cutting the energy requirements by even 5%, let alone 20%, would result in huge savings.

A Whale of an idea: WhalePower's humpback-inspired tubercle technology marks next evolution in airfoil design, www.design-engineering.com, 1 November 2010.



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Atkins' evolutionary diet of meaninglessness

A review in *New Scientist* of Peter Atkins' latest book *On Being* is tellingly parked under the joyless heading "Existence is useless". Atkins, an Oxford evolutionist professor, is renowned for having earlier said that man is "just a bit of slime on the planet", and in this book he continues along that theme. "Deep down," he writes, "we, like everything, are driven by purposeless decay."

The reviewer notes that "as might be expected of a loud-voiced atheist, Atkins misses no opportunity to take a swipe at religious ideas ... for entertainment's sake". Evidently a fellow atheist, the reviewer glowingly describes Atkins' book as "food for the atheist's soul". We would say it's rather evidence of 'itching ears syndrome' (2 Timothy 4:3).

Existence is useless, *New Scientist* 209(2804):54, 19 March 2011.

Type the words in **bold** into the search box on:
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LIFE IS IN THE BLOOD



■ **Andrew Hodge**

“For the life of the flesh is in the blood”

SO SAYS Leviticus 17:11. Everyone knows that we must have enough blood flowing around our body or else our bodily functions deteriorate and we die. Yet for a long time the exact function of blood was little understood. In what ways has modern science shown Leviticus 17:11 to be true?

Blood is fundamental to the function of every cell of every component in our bodies. Cells need food to survive, grow, repair themselves and to fulfill their specific functions, and, to reproduce. Cellular food is transported in blood to provide energy for all the cells' needs. As humans are multicellular organisms, having separate specialized organs with highly sophisticated functions, transport and communication between these structures is essential.

Coordination

Do the cells of the body tell the blood how it should work? No. Does the blood carry around everything possible just in case? No. The cells and the blood work together to provide optimum conditions for correct functioning of all the cells—with their different requirements—in all the tissues and organs of the whole body, including the cells of the blood itself.

Blood provides this coordinated environment by regulating acidity/alkalinity (pH), providing oxygen (and removing carbon dioxide and other waste products), and carrying essential vitamins and minerals. Also, blood has to be in the right places at the right times, at the right temperature and pressure, and it carries regulatory messages between organs via blood ‘messengers’ called hormones. All this is organized within very specific limits—straying outside these (through injury, disease, toxins, etc.) rapidly reduces functionality.

Hormonal feedback

Hormones, those important chemical messengers in the blood, are involved in self-regulating feedback systems. These systems stimulate hormone production in times of lack, and suppress it in times of plenty. For example, when we eat, the sugars in the intestine are digested and absorbed into the local bloodstream. This blood then passes through the pancreas and its higher sugar level stimulates production of the hormone insulin. As insulin is distributed in the bloodstream, it reduces the blood sugar to normal levels again by increasing the amount of sugar that all cells take in. In fact the brain relies almost entirely on sugar (specifically glucose) for its energy supply; hence this feedback system is absolutely critical for proper brain activity. If the blood glucose ever drops too much, we lose consciousness.

The body’s systems tend to be wisely over-engineered, so that one might predict that there is also a system to cope with low sugar levels, for example when we exercise and use sugar up. This system uses the hormone glucagon (also from the pancreas) and it works by releasing glucose into the blood from stores located mostly in the liver.

There are about fifteen organs classed as hormone-producing (endocrine) glands,¹ and their products, carried by the blood, affect either every cell in general or specifically target certain cells. Widely known examples are the male and female hormones testosterone and estrogen, adrenaline (epinephrine in the US), the thyroid hormone thyroxine, and many more.

Targets

For example, thyroxine regulates the speed of metabolism in every cell, and having the correct amount (within narrow limits) allows normal cellular activity. Too much and we become ‘hyper’, too little and we are slow and lethargic.

Another example is gastrin. The target organ for gastrin is that part of the inner lining of the stomach which produces hydrochloric acid for digestion. Food in the last part of the stomach stimulates the production of gastrin, which is carried back by the blood to stimulate acid production. This is a positive feedback mechanism in which blood is the essential communicating link.

Anticipation

Blood also has a major role in body protection in that it is an integral part of the immune or infection-fighting system, involving antibodies and white blood cells. It also possesses a highly complex mechanism to prevent its own loss from the body (clotting) and to prevent clotting inside the body (thrombosis). The capacity to quickly initiate clotting outside and to limit—even reverse—clotting on the inside is provided by ‘cascades’—cumulative processes in which each step of the process is dependent on the one before it (see box page 15). The cascades are of such complexity that new factors, cofactors and regulators are being constantly

added to our body of knowledge. It is now known that there are more than a hundred factors or steps that make up the clotting cascade.² Such details add to our appreciation of how finely balanced, effective and versatile the system is. But a greater marvel is that such a system, which is there in anticipation of blood loss, internal injury or disease, should be there at all.

Unique red blood cells

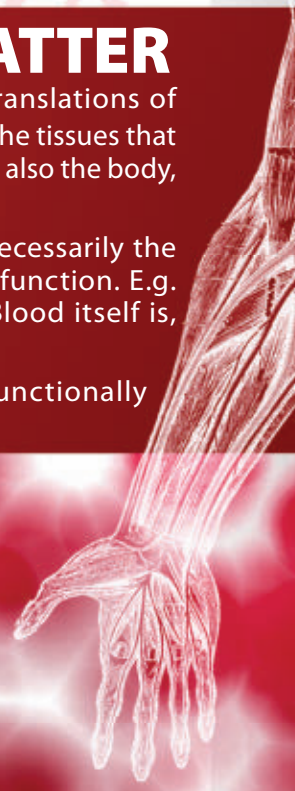
Red blood cells (RBCs or erythrocytes) form the majority of the cells in the blood—and a quarter of all cells in the human body. They are unique among all others—in mammals, they have no nucleus and none of the usual energy-producing structures in the cell outside the nucleus. This is a design feature of mammals (creatures which, like us, suckle their young). Normally, a cellular nucleus carries the DNA which instructs the cell on how to perform its functions, including repair and reproduction, at the appropriate times. RBCs cannot do this because instead they are especially designed to carry oxygen, and in humans, having a nucleus would hinder this essential function. So the nucleus is

WORDS MATTER

FLESH (as used in many English translations of Leviticus 17:11): Hebrew בָּשָׂר *basar*, the tissues that make up the body, and (by extension) also the body, the living creature.

TISSUE: a collection of cells (not necessarily the same type) grouped for a specific function. E.g. connective tissue, muscle tissue. Blood itself is, technically speaking, also a tissue.

ORGAN: several types of tissue functionally grouped together, e.g. liver, lung.



WHY IS BLOOD RED?

The red colour of blood reflects the colour of the hemoglobin inside the red blood cells. This is because the hemoglobin contains iron. The 'heme' of the hemoglobin molecule in vertebrates (creatures with a backbone) is a porphyrin ring which surrounds ferrous iron atoms. It is the spatial relationship between heme, iron and globin which makes it possible to bind oxygen molecules reversibly—one to each iron—and which makes the system so efficient.

lost after formation, leaving them with their characteristic biconcave shape.

Two reasons have been suggested for this. First, the relative size of RBCs (6–8 μm diameter and just 2 μm thick)³ and capillaries (tiny blood vessels) is such that red blood cells often have to deform in order to squeeze through. A nucleus (about 6 μm on average⁴) could prevent passage of the cell and make it get stuck, blocking the circulation.

Second, the shape and deformability of the red blood cell is optimized for the carrying and delivery of oxygen, and it maximizes the amount of hemoglobin that can be packed into the cell. Nevertheless birds, which have a very high oxygen requirement, do fine with nucleated RBCs, so there are other

design features in birds that compensate for this.⁵

The system of the red blood cells giving oxygen to the cells of the tissues is reversed when the red blood cell reaches the lungs, where it gives up its carbon dioxide (though this is mostly carried by plasma⁶) and takes on a new load of oxygen. At rest, all the blood (5 litres in an adult) completes a circuit within a minute (spending 1 to 3 seconds in the capillaries). With exercise, circulation is as quick as every 10 seconds.⁷ Having a molecule such as hemoglobin which can handle oxygen so quickly and reversibly, when required, is amazing.

Conclusion

So is the life of the flesh in the blood? Although not confirmed by science until modern times, this statement

from Leviticus 17:11 has always been true. Blood actively maintains life by providing a vital function for all cells, tissues and organs, and thus the life of the whole body. The more we find out about the astounding functional design and complexity of blood, the more marvellous it becomes to us, and the more honour and praise is due its Creator. ■

References and notes

1. Guyton, Arthur C., *Textbook of Medical Physiology*, Eds Arthur C. Guyton, John E. Hall, p. 838, W.B. Saunders Co., Philadelphia PA 19106, 10th Edition 2000.
2. E.g. there is an international scientific journal dedicated solely to Thrombosis and Haemostasis (Schattauer, ISSN 0340-6245, 12 issues/yr).
3. 1 μm (micrometre) is a millionth of a metre, or 1/25,400 inch.
4. 'Cell Nucleus', *Encyclopaedia Britannica: Ultimate Reference Suite* 2005.
5. See e.g. creation.com/bird-lung.
6. Most of the oxygen in the bloodstream (98%) is carried on the hemoglobin in the RBCs; a little is dissolved in the plasma. Most of the carbon dioxide returning to the lungs is carried dissolved in the plasma, with a small amount in the RBCs.
7. Guyton, Ref.5, p. 3.

ANDREW HODGE, M.B., B.S., FRACS

Dr Hodge is retired from his former post as Head of the Cardiothoracic Surgical Service at the Fremantle Hospital in Western Australia. A long-time supporter of Creation Ministries International, he has written for both Creation magazine and Journal of Creation.

BLOOD BYTES*

There are about 4–6 million red blood cells (RBCs) in every cubic millimetre of blood; 20–30 trillion of them in each person.

Every day about 1% of these are changed. New RBCs take about 7 days to form in the bone marrow, and are produced at the staggering rate of about 2 to 3 million every second.

Each RBC lasts about 120 days before its components are recycled to form new RBCs.

During its 4-month lifetime, each red cell travels some 500 km (300 miles) around the body, passing through the heart about 14,000 times per day.

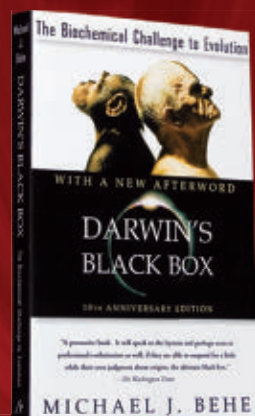
Most of our blood vessels are the microscopic capillaries. If the blood vessels in one person were laid end to end, they would be about 150,000 km (100,000 miles) in length—enough to circle the earth at the equator about four times!

*All figures are for a healthy adult

IRREDUCIBLY COMPLEX: THE CLOTTING CASCADE

The function of the blood clotting system is to prevent the escape of blood from a damaged vessel. To do this, the blood has a special and very complex repair procedure in place. Once initiated by a cut, the first component in the process is activated, which in turn activates the next component, and so on, in a series of cumulative, mutually-dependent steps. This physiological chain of production, or cascade, results in the formation of a solid obstruction (a clot) in order to seal over the damage.

Some of the main components of the clotting cascade are the proteins fibrinogen, prothrombin, Stuart (anti-hemophilic) factor and proaccelerin. None of these are used for any other purpose in the blood. The system is very finely tuned to result in a repair process that achieves just the repair needed at just the right place and time to stop bleeding and begin the process of healing. Importantly, the process is also self-limiting to ensure that coagulation (clotting) of the entire blood supply does not occur.



The Intelligent Design advocate Michael Behe, in his book *Darwin's Black Box*, has noted that the clotting cascade is an example of irreducible complexity. The removal or degradation of just one, any one, of the components or steps would cause the cascade to fail. Obviously this would have dire consequences for the organism. It is exceedingly difficult to see how the clotting cascade could have evolved, as any postulated simplified or 'primitive' version of the process would result in failure.¹

Behe, M., *Darwin's Black Box*, The Free Press, New York, USA, pp. 74–97, 1996. Available creation.com/store.

1. See also Behe, M., *In defense of the irreducibility of the blood clotting cascade: Response to R. Doolittle, K. Miller and K. Robison*, www.trueorigin.org/behe03.asp, 2000.

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Pollen Paradox



Evolutionists have 'allergic' reaction to Precambrian pollen—South American fossils more than a billion evolutionary years 'out of date'

**Emil Silvestru and
Carl Wieland**

ENGLAND'S SIR Walter Raleigh, who introduced tobacco and potatoes to Europe, is best known for having supposedly used his expensive cloak to cover a mud puddle to protect the feet of Queen Elizabeth I. He was beheaded by her successor, James I (of KJV Bible fame) in 1618, but not before he had become the first European to discover South America's Mount Roraima. Its peak, some 2,810 m (9,219 ft) above sea level, is in Venezuela.¹ The area was also the setting for Arthur Conan Doyle's famous novel *The Lost World*.

Mount Roraima is one of a group of table-top mountains (or mesas) known locally as *tepui*s, made of quartz arenite sandstone. This is believed to be the remains of a large sandstone plateau.

By all orthodox geological methods, including radiometric 'dating', this rock is supposed to have been laid down no less than 1.7 (most say 1.8) *billion* years ago.

On the standard evolutionary geological column (Fig. 1), this was the Precambrian, well before there was supposed to be any multi-cellular life

on Earth—only bacteria and algae. It is certainly long, *long* before there were supposed to be any plants on Earth capable of producing spores or pollen. The very earliest that evolutionists would countenance anything even remotely like a seed-bearing plant is the late Devonian, around 380 million years ago.

Fossils in the 'wrong' era

Yet fossils of spores and pollen have been found in the Roraima formation, as reported in a 1966 article in the prestigious journal *Nature*.² That means they are *at least* 1,300 million, or 1.3 billion years 'out of date'.

The discovery was made in 1963, when a palynologist³ from an oil company tested samples collected from the area by a botanist. The above-mentioned paper in *Nature* was by Dr R.M. Stainforth,⁴ a geologist regarded as somewhat of an authority on the region's stratigraphy and micropaleontology. It was such a baffling find (for long-age belief) that in 1964, a special expedition of qualified geologists was sent to verify the facts. They took more samples, trying to avoid areas where pollen from outside could enter the rocks (like cleavage planes). Then three palynologists independently tested the samples—and found more of the same fossil pollen and spores.

Could the rocks have been wrongly dated?

A 1964 letter to *Nature* cited studies reported in the same journal the previous year that confirmed that the Roraima rock definitely had to be assigned that vast age in the evolutionary system.⁵

In his notes accompanying a weblisting of many of his papers, Stainforth, himself accepting of evolution's long-ages, stated about this find:

"The rocks concerned are unquestionably ancient (Precambrian) and are so altered that no organic matter should be recognizable in them. Also they are physically dense, with no obvious routes (such as natural permeability/porosity or crack systems) through which solid particles might enter them. Yet standard palynological techniques recovered well-preserved fossil pollen from the samples!!!"⁶ [Triple exclamation in original.]

The species responsible for the fossil pollen and spores are hard to assign with certainty, but definitely do not represent the sorts of species in the area nowadays. As stated, they can be no older than 'Devonian'. Most reports suggest types of plants which evolutionary reasoning puts into the Tertiary period, some

60 million years ago. This makes the evolutionary discordance over 300 million years worse than the 1.3 billion years stated earlier.

Coping with conundrum

In his original article in *Nature*, Stainforth reports how opinions on this evolutionary paradox basically fall into two camps (both long-age, of course). The first camp says, in effect, that the radiometric dating shows the rock *must* be that old. But by evolutionary reasoning, having plants living at a time more than a billion years before they emerged is impossible. So therefore the pollen *must* represent some sort of secondary contamination.

In support of their contention, they state that the rock shows significant alteration by metamorphism,⁷ making it unlikely that fossil pollen could have survived.

The second camp responds that no-one has ever tested the belief that fossil pollen cannot survive metamorphism. (This was true then, but not now: a 2007 paper described “remarkably preserved” fossil spores in rock in the French Alps that had undergone high-grade metamorphism.⁸ One of us—ES—is also familiar with fossil spores in Romanian metamorphic rock.)

The second camp also points out that the rock’s altered (hardened) nature is evidence for their belief that:

“by no conceivable physical means could the pollen (and spores) have entered the metamorphosed sediments from the outside. They are dense impermeable rocks compressed by an overburden of hundreds of feet... [and] the face which was sampled must have been deep within the formation until quite recent times.”⁹

Stainforth’s last paragraph states: “we offer no solution to the paradox.” It ends by calling this “a highly intriguing geological problem.”

The rules of the game

It has long been clear that the evolutionary/long-age framework of understanding

is a powerful philosophical paradigm that resists falsification. Evolutionists have protested that it would be ‘easy’ to falsify evolution and its associated long-age system—just produce a substantially out-of-place fossil, e.g. rabbits in the Cambrian.

There have in fact been many instances where fossils have been found where they have not been expected. However, these only serve to demonstrate the strategies available to long-agers for coping with such unexpected discoveries. They can, for instance, extend the known range of the species to incorporate the new information.

Or they can assume that the fossil is an example of ‘reworking’. I.e. fossils from ‘age’ A have somehow entered a layer of ‘age’ B. Sometimes there is evidence that such ‘intrusive burial’ has happened. But as we see from the position of the first camp regarding the Roraima pollen, it can be (and often is) held in defiance of the physical evidence.

Simply put, the Roraima pollen ‘can’t be’ the same age as the rock—or else the whole long-age geological system, with its evolutionary progression, collapses. The only reasonable alternative would be biblical (supernatural, recent) creation.

So these fossils simply ‘have to’ be from a much later era, somehow having become mysteriously emplaced into the rock countless hundreds of millions of years after it formed and hardened (according to the evolutionary story).

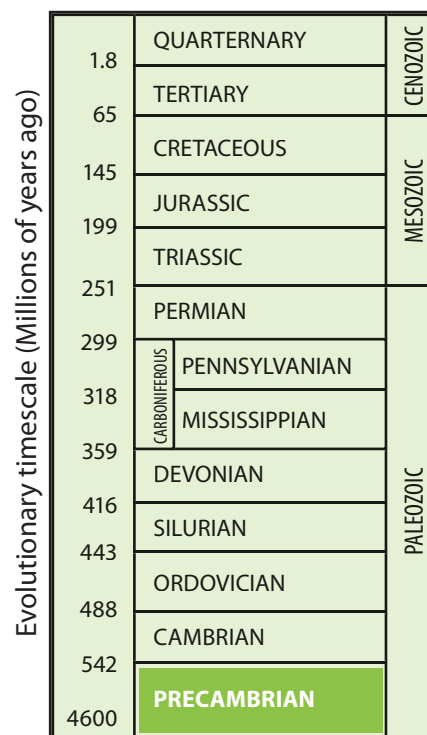
What if all such attempts at explanation fail, and the physical evidence is faced squarely—as for the second camp above? Well, one just puts it on the shelf as an unsolved mystery. That’s the way it’s been for the Roraima evidence for around half a century.

Either way, it’s like a game with loaded dice—the ‘house’ (long-age belief) wins every time. ■

References and notes

1. The extent of the mountain (31 km² or 12 sq. miles) includes the triple border point of Venezuela, Brazil and Guyana (previously British Guiana).
2. Stainforth, R.M. Occurrence of pollen

Fig. 1 Geologic column



and spores in the Roraima Formation of Venezuela and British Guiana, *Nature* **210**:292–294, 1966.

3. Palynology = the study of present-day and fossil pollen, spores, etc.
4. He was the driving force behind the bulletin of the Asociación Venezolana de Geología, Minería y Petróleo.
5. Bailey, P.B.H., Possible Microfossils found in the Roraima Formation in British Guiana, *Nature* **202**:384, 1964. Bailey was with the Geological Survey of British Guiana, Georgetown.
6. http://rpasmd.org/rms/Annotated_list_pubs.htm.
7. This is when a rock is changed by recrystallization, through e.g. heat and pressure, to another type—limestone into marble is one such example.
8. Bernard, S. *et al.*, Exceptional preservation of fossil plant spores in high-pressure metamorphic rocks, *Earth and Planetary Science Letters* **262**(1–2):257–272, 2007.
9. Ref. 2. The pollen at Roraima was also found in hornfels, a very hard rock formed by contact metamorphism.

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Turning the Tide

Russell Grigg

Fifty years ago Old Testament theologian Dr John C. Whitcomb and hydraulics engineer the late Dr Henry M. Morris published *The Genesis Flood*. No other single work before or since has so effectively encouraged Christians' belief in the historicity of Genesis, and the divine inspiration, scientific accuracy, and authority of the Bible as a whole.

The Genesis Flood challenged the key principle of the atheistic theory of evolution—long ages—meaning that the earth and most of the fossils in it were millions of years old. Combining what the Bible actually said with scientific data from hydrology, geology and archaeology, Whitcomb and Morris showed that the biblical text required there to have been a world-wide Flood (not just a local or a tranquil one), and that true science substantiated this. Furthermore, they showed that this was recent (i.e. during the days of Noah, some 4,500 years ago), and that it could account for the fossils in the so-called 'geological column'.

All this of course was totally contrary to the slow-and-gradual processes over millions of years that 20th-century geologists taught, emanating from Charles Lyell's *Principles of Geology* (1830–33)—the textbook which had so greatly influenced Charles Darwin.

The Genesis Flood also exposed the scientific and biblical falsity of day-age and gap theories, and theistic evolution, as well as 'progressive creation'—particularly that proposed by theologian Bernard Ramm.¹ Morris applied laws and principles such as thermodynamics, stratigraphy, hydraulics, etc., to Creation Week and/or the Flood. He also exposed deficiencies in radiometric dating methods, while providing many real natural evidences for a short age to the earth.

In short, he and Whitcomb demonstrated both biblically and scientifically that Earth's history better fitted that which is recorded in Genesis than the evolutionary script, and showed that the first eleven chapters of Genesis are as truly historical as the remaining thirty-nine. The Bible could be trusted after all!

The book gave huge impetus to the Christian education and home-school movements, as rank-and-file Christians could now uphold the truth and authority of the Bible because they could now defend Genesis. This was particularly appropriate in 1961, as just two years earlier speakers at the 1959 Darwin Centenary Convocation at the University of Chicago had urged that schools henceforth centre their curricula around the alleged 'fact' of evolution.²

There are people now working in creation ministries who could attest that their lives were forever changed by reading *The Genesis Flood*. They include Dr Carl Wieland, Dr Don Batten and Dr Tas Walker, all of CMI-Australia, Adrian Bates (CMI-NZ), Dr Johan Kruger (CMI-SA), and Tim Matthews (CMI-UK).

Science moves on, and so it is not surprising that a portion of the geological arguments used are now outdated. For example, at the time of publication, continental drift was not an issue. Today, its omission from such a discussion would be seen as a serious failure to engage secular thought.



Creationist geologists from ICR and other organizations, including Henry Morris's son, Dr John Morris, have been at the forefront of refining, developing and expanding the book's arguments in all manner of geological areas.

There can be no doubt, though, that what *The Genesis Flood* set in motion was a complete paradigm shift—it turned the tide. It brought about a basic revolution in the whole framework within which thoughtful Christians with scientific understanding were able to view and interpret phenomena related to the past of our planet.

RUSSELL GRIGG, M.Sc.(Hons.)

was an industrial chemist before serving 20 years with Overseas Missionary Fellowship (now OMF International). He is a staff member of Creation Ministries International in Australia.

The authors of *The Genesis Flood*

Dr John C. Whitcomb (b. 1924) has been a professor of Old Testament and theology for over 50 years. He gained his Th.D. from Grace Theological Seminary in 1957. As a young Christian he had been searching for a way to reconcile Genesis with the scientific teaching of the day, until he heard scientist Henry Morris demonstrate that the Bible would not allow any compromise with evolution, and that science did not require it. Then, after reading Bernard Ramm's *The Christian View of Science and Scripture* (1954) which disowned the idea of a young earth, the recent appearance of humans, and a universal flood, Whitcomb devoted his Th.D. thesis to defending flood geology. In due course he and Dr Morris combined their efforts and produced *The Genesis Flood*. Other books by Dr Whitcomb include *The World that Perished*, and commentaries on *Daniel* and *Esther*.

Dr Henry M. Morris (1918–2006) received his Ph.D. in hydraulic engineering from the University of Minnesota in 1950. Over the next two decades he served as professor and chair of civil engineering at three universities, and wrote the widely-used textbook *Applied Hydraulics in Engineering* (1963). In 1970, Dr Morris founded the Institute for Creation Research (ICR), and served as its President until 1996 and then

as President Emeritus until his death. He lectured worldwide at conferences and universities, and participated in over 100 debates. Dr Morris wrote over 60 books,³ including such creation 'classics' as *The Genesis Record*, *The Biblical Basis for Modern Science*, *Biblical Creationism: What Each Book of the Bible Teaches About Creation and the Flood*, and *The Long War Against God: the History and Impact of the Creation/Evolution Conflict*.



References and notes

1. Especially that of Bernard Ramm's *The Christian View of Science and Scripture* (1954).
2. Morris, H., *Global Flood, Global Impact*, quoted in *Acts & Facts*, Feb. 2011, pp. 10–11.
3. Also, hundreds of his *Days of Praise* devotional articles are still being read by nearly half a million readers each day. (ref. 2, p. 5.)



Gary Bates on fellow
'abduction' researcher
Joe Jordan

LIFTING THE VEIL ON THE UFO PHENOMENON

THOUGH JOE Jordan's ministry might easily be misunderstood by some Christians, his specialty in the UFO phenomenon is actually a subset of the creation vs evolution debate. Joe was initially led astray in this area by popular culture, which shows how important it is for Christians to engage the culture with sound information—regardless of how weird we might think it to be at times. As a fellow traveller in this area, Joe and I have been in a friendly symbiotic relationship for many years now. His research, which specifically deals with the claims of people believing to have been 'abducted by aliens', helped me expose the satanic deceptions that underpin these experiences in my book, *Alien Intrusion: UFOs and the Evolution Connection*.

Prior to becoming a Christian, Joe described himself as a 'crystal-ball-rolling new-ager' with an interest in science fiction, which he saw as merely escapism. Although an evolutionist due to his public school education, it was not immediately obvious to him that most sci-fi and its depiction of alien life has evolutionism at its core (if life evolved on Earth it must have evolved elsewhere in a 14-billion-year-old universe).

Initially, Joe did not know much about the phenomenon. A book called *UFO Crash at Roswell* piqued his interest.¹ It claimed to be a scientific investigation of the alleged crash of a flying saucer at Roswell, New Mexico, in July 1947. Joe's experience resonated with me, because as a young man the best-ever-selling book on the subject, *The Roswell Incident*, had convinced me, like many others, that the government was complicit in hiding the truth about aliens.



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Drawn into a substitute religion

Now 'hooked', Joe wanted to know more. He visited a local UFO museum, talked with UFO researchers and read up. He was surprised to see a large array of 'spiritual' UFO books dealing with events like the Fatima sightings.² Christianity is under assault from this area, because many believe that supernatural encounters and miracles in the Bible can be attributed to benevolent aliens being mistaken as angels or even God, and that these aliens may even be mankind's creators.³

Joe quickly qualified to be a state section director and investigator with the highly respected MUFON,⁴ investigating claims of UFO sightings and experiences of those who claim encounters with 'alien' beings. At monthly MUFON meetings, Joe was strongly confronted by the spiritual paradigm of the UFO-believers. He realized that, for many, it is a full-blown religion. These 'highly evolved aliens' were claiming to be helping humanity evolve to a kind of enlightened ascendancy into a new age. Although Joe was brought up in the church, like many youth he abandoned the idea of a biblical creator. This 'new religion' gave Joe a sense of spirituality, but without the accountability that the Bible demands. With no supreme creator, man can make up his own rules. Each experience is just part of one's spiritual growth into the new age.

UFO research revealed the truth

Around this time Joe and fellow MUFON investigator Wes Clark started their own research group called CE4⁵ specifically to deal with alleged alien abductions or 'Close Encounters of the Fourth Kind'⁶ experiences. They attempted to unravel the more bizarre aspects of this phenomenon that defy scientific explanation. Experiencers record huge chunks of 'missing time' that cannot be accounted for; allegedly physical aliens are claimed to walk through walls; and the experiencers themselves are often taken up to the spaceship through the ceilings of their homes. MUFON and other researchers had enormous problems trying to explain the physics-defying aspects of these abduction-type experiences, which were escalating.

Joe saw the damage these were causing in the lives of the experiencers. He and Wes revisited all the cases they had investigated to see if there was something that the other investigators were missing. In the fall of 1996, Joe was working on two particularly disturbing accounts which seemed more sinister than many of the others. A Christian friend told them that they were dealing in the spiritual realm and thus needed protection. "So, I pulled out my crystals", Joe said. "But she shared the Bible with

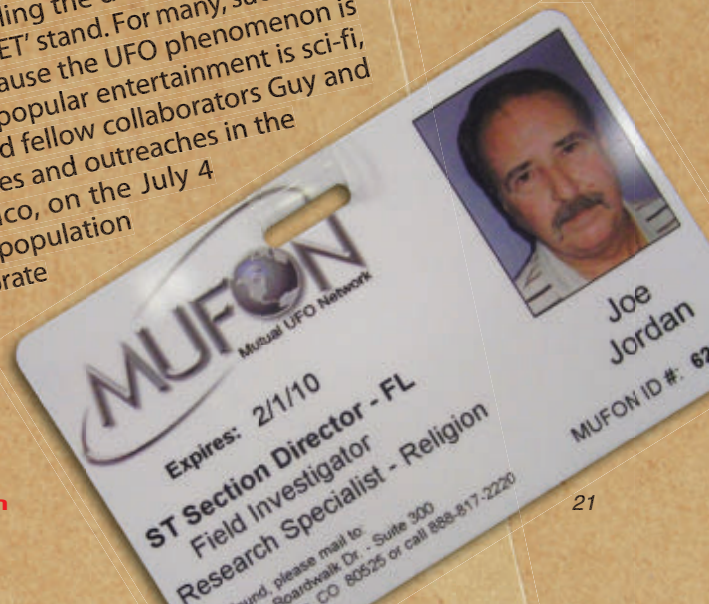


Joe Jordan with Gary Bates (above) and Guy and Nicole Malone (below)



The most hated man in UFOlogy?

Joe is obviously not popular with many UFO believers for 'blowing the whistle' and revealing the deception behind it all—and for taking a biblical 'No ET' stand. For many, such truth threatens their livelihoods because the UFO phenomenon is big business. The single most popular entertainment is sci-fi, for instance. Each year Joe and fellow collaborators Guy and Nicole Malone run conferences and outreaches in the town of Roswell, New Mexico, on the July 4 weekend, when the town's population doubles in size to commemorate the infamous 'Roswell Incident' of 1947. And Joe is available for talks in churches on this subject.



me instead. It was the first time I'd ever heard a true gospel presentation and understood what Christianity was really all about. I confessed my sins and became a Christian."

Now Joe wanted to reconcile the UFO phenomenon with his newfound faith. He and Wes attended a two-week Bible study. Although Joe's new circle of friends were Christians, most believed that God created intelligent sentient life on other planets. Now life was either created or it evolved, and it is because of evolution that most people believe that life evolved elsewhere as well. But as I can confirm from many years speaking on the subject, most Christians wrongly believe God created such life elsewhere, "Otherwise why would He have made the universe so big?" For them, this allows God to have created the aliens, and this seems to explain the phenomenon. However, such an idea actually undermines the very gospel of Christ and the reason He came to Earth (for more see reference 7). Back in 2005 after reading the first edition of *Alien Intrusion*, Joe said to me, "Gary, your book has helped me shut the door on the idea of ET life. Despite what most Christians think, it showed me that the Bible clearly does not allow for such things."

It was encouraging that two Christians, continents apart (I was then living in Australia), could come to the same conclusions and help each other, if prepared to be open to what the Bible actually says. *Alien Intrusion* recently had a chapter added. It contains a new hypothesis to try to solve what is really happening to people during such 4th- and 5th-kind encounters. Joe provided

feedback that this hypothesis was 'spot on'. It meant a lot, given that he has probably counselled more experiencers than anyone else I know.

The unwanted piece of the puzzle

One of Joe's cases involved a brand-new Christian called Bill D. During an alleged alien abduction he cried out "Jesus, help me!" and the encounter immediately stopped. When Joe contacted other MUFON investigators to see if they had had similar cases, they would only agree to talk to Joe if it was 'off the record' for fear of their careers. The truth was they all knew of similar accounts of abductions being stopped by people praying, singing hymns or calling on the name of Jesus. But because it was 'religious in nature' and not 'scientific', the evidence was being deliberately ignored and actually hidden. Joe's CE4 group knew there must be more cases with which they could expose the deception. A local newspaper, *Florida Today*, reported on CE4's initial findings. The story went viral via the press and internet, and suddenly, lots of people were contacting CE4 sharing similar testimonies. This research of Joe's was pivotal in helping me and others create awareness in the Church on this widespread phenomenon.

Joe's current ministry sees him counselling many experiencers with the aim of leading them to Christ. To date, he has worked with over 400 people who have had their 'abduction' episodes halted in the name of Christ (some of them don't want to be identified). He has valuable insight into the whole UFO realm as he has seen it from two

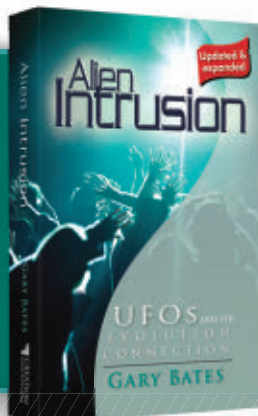
different sets of eyes—as an unbelieving new-ager, and now as a Bible-believing Christian. Like me, he found that the Bible has the answers to explain what is really happening. Moreover, the Bible also explains that non-Christians are unable to see the phenomenon for what it really is, "The natural person does not accept the things of the Spirit of God, for they are folly to him, and he is not able to understand them because they are spiritually discerned." (1 Corinthians 2:14 ESV) ■

References and notes

1. See creation.com/roswell, 12 August, 2010, and Bates, G., *Alien Intrusion: UFOs and the Evolution Connection*, Creation Book Publishers, Atlanta, May 2010, pp. 179–194. The majority of the claims about Roswell have been shown to be fiction.
2. Three shepherd children claimed that on 13 October, 1917, a miraculous event would occur. It is claimed that tens of thousands of people saw the sun 'dance and spin'. The event was attributed by many to 'Our Lady of Fatima'—an alleged apparition of the Virgin Mary.
3. See creation.com/alien, 12 August 2010, and *Creation* 25(4):54–55, September 2003.
4. MUFON—*The Mutual UFO Network*.
5. www.CE4research.com
6. A UFO classification system devised by former government researcher Dr J. Allen Hynek. See creation.com/the-fourth-kind, and Bates, G., *Alien Intrusion: UFOs and the Evolution Connection*, Creation Book Publishers, Atlanta, May 2010, Chapter 7, pp. 255–266.
7. See Did God create life from other planets? Otherwise why is the universe so big?, *Creation* 29(2):12–15, 2007; creation.com/lifefromplanets.

GARY BATES

is the CEO of Creation Ministries International (US) based in Atlanta, Georgia. He has been involved in the creation/evolution debate with CMI for over 20 years and is CMI's resident authority on the UFO/alien phenomenon.



The need for information

This is a huge mission field; polls often suggest that millions of people claim to have been abducted by aliens. Whether accurate or not, this is clearly a growing and disturbing phenomenon in our midst. And due to beliefs in evolution and popular cultural ideas that older, technologically advanced aliens are visiting the earth, people are ripe for deception. For one who has never been in a church, read a Bible, or known Jesus as their Saviour, such events can be a life-changing experience that causes people to reject all thought of God as their Creator and Judge. When people look at the majestic universe God created, they tend to ponder what else might be out there. Instead, we should be considering, in awe, the One who made it. For as Psalm 19:1 reminds us, "The heavens declare the glory of God and the sky above proclaims his handiwork."

Alien Intrusion (new updated edn.) available addresses p. 2 or creation.com/store

Horsetails

are 'living fossils'!

David Catchpoole

KEEN GARDENERS know that horsetail plants are just the thing to have around a water feature, or areas with poor drainage. An added attraction, apparently, is that horsetails are 'living fossils'.¹ That is, the horsetail is a plant that looks just like horsetail fossils 'dated' at over 145 million years old—what evolutionists refer to as the Jurassic Period or 'dinosaur era'.

But why no evolution in all that (supposed) time? The horsetail and other 'living fossils' show evidence of stasis, not evolutionary change. The horsetail is nevertheless often paraded as evidence of an evolutionary timeline, and is itself described in evolutionary terms. E.g. horsetails are said to be "too primitive to bear seed so they reproduce by spores like ferns".¹

However, as with all 'living fossils', the horsetail is in accord with the biblical account.

Firstly, there has been no evolutionary change, ruling out any notion of 'primitive' vs 'modern'—horsetails give rise to horsetails, reproducing "according to their kind", right in line with Scripture (Genesis 1:11–12). They're wonderfully suited to marshy ground, which they can colonize rapidly and "aggressively".¹

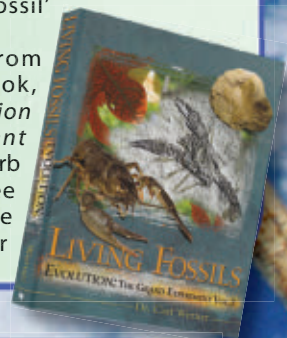
So much for their supposedly being 'primitive'!

Secondly, the beautiful preservation of horsetail fossils, found right around the world, fits with catastrophic burial at the time of the global Flood of Noah's day, about 4,500 years ago. Both horsetails and dinosaurs were created, along with



Horsetails, also known as scouring rush (because tied in bundles they make serviceable brushes, as above), have a hollow, jointed stem. Note the detail of the joints preserved in this 'dinosaur-era' horsetail fossil from Jurassic rock found at the Dinosaur National Monument, Utah, USA. Now compare with the living horsetail—a 'living fossil' indeed.

These photos are from Dr Carl Werner's book, *Living Fossils—Evolution the Grand Experiment* Vol. 2, (p. 205) and superb documentary DVD (see below), both available from addresses on p. 2 or creation.com/store



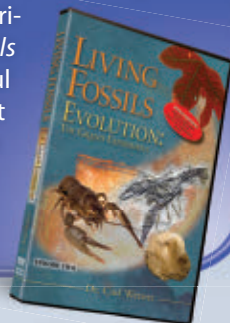
everything else, during Creation Week just 6,000 years ago—they do not hark back to a supposed evolutionary 'Age of Dinosaurs' millions of years ago! (See also p. 35, this issue.)

So it's no wonder that both living and fossilized horsetails are the same. While some people might be disappointed at losing the evolutionary symbolism of having a 'prehistoric' plant growing in their own garden, Christians need to be ready to remind people that horsetails are very much from the present, not the past. By definition, no living plant can be 'prehistoric'.

References and notes

1. Living Fossil Horsetail Reeds for Gardens, www.moplants.com, acc. 6 April 2011.

This astounding *Living Fossils* DVD documentary shows that many modern animals and plants occur as fossils in rock layers that are 'dinosaur era'. Yet museums don't portray dinosaurs with modern organisms, reinforcing evolutionary ideas of origins. *Living Fossils* provides powerful evidence that microbes-to-man evolution never happened.



CREATION FOR KIDS

APE-MEN... Fact OR Fantasy?

PART 1

By Ron and Lara Gillespie

Most of you would have seen a picture something like this (below) and I'm sure you've heard that many people today believe that we humans evolved from something like monkeys (apes).

But we also know that the Bible teaches that we were created by God on the sixth day of Creation Week.

If scientists and books and TV say that we came from apelike animals—mustn't that be true? Well, let's have a look at some of the facts...

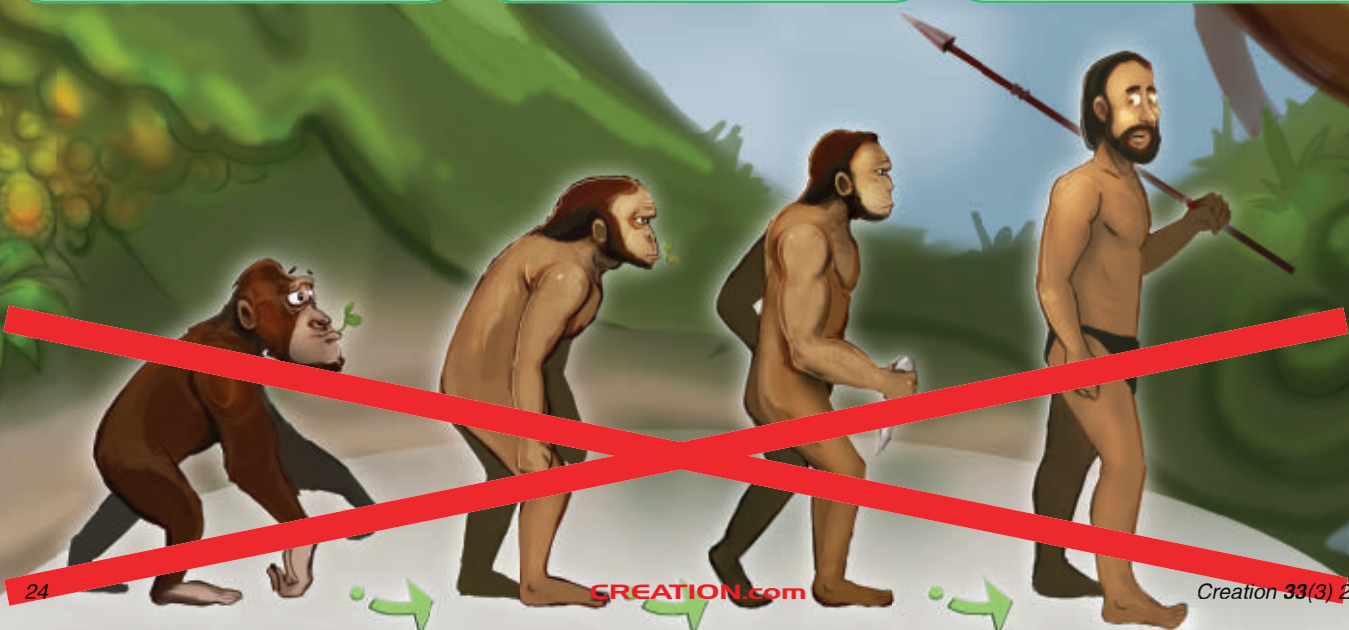
What about all the pictures and models I've seen in books and museums?

An important thing to know is that you can't believe everything you see in a book or on TV because it's not always the truth.

Many of the pictures and models of 'ape-men' have been based on just a few pieces of bone. Artists are asked to guess about things they can't possibly know—like

what the skin colour, lips, muscles, hair etc. look like. Sometimes whole families are drawn, with their tools and where they are living and what they are eating and what they look like all from these small pieces of bone. Some artists who do these drawings have admitted that much of it is made up or guessed!

Some ape-like creatures have been drawn walking upright like humans when studies of their inner ear showed they actually couldn't

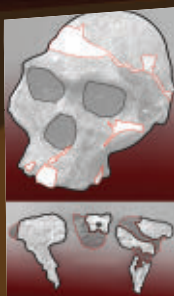


have walked upright—but no one changed the drawings because it suited the evolution story better!

In fact a few of these pictures of apemen were later shown to be based on false fossils—that is, ones that were made up by humans as tricks (e.g. Piltdown Man), or ones that turned out to be something else—like ‘Nebraska Man’ whose whole family was drawn like this (see top picture, right) based on a tooth that belonged to an extinct pig!



From this ... to this? ...



Or this ... to this? ...

It just shows you can't trust everything you read—humans are always making mistakes, but the only thing you can really trust 100% is God and the Bible.

But what about 'cave-men'?

If you've been to a museum you might have seen a 'cave-man' display showing bent-over, very hairy men living in caves, called 'Neanderthals'. Doesn't that prove there were part-ape creatures that evolved into men?

Well, remember that firstly we don't know if 'cave-men' were that hairy or what many of their face features

like lips and noses and ears looked like. Most of that has to be made up by artists and it will usually be made to fit the evolutionary story (that humans came from 'apes'). Some of the first Neanderthal skeletons found were bent over—but that's now been found to be due to bone disease.

But now even most evolutionists (people who believe that humans did come from monkey-like creatures) accept that Neanderthals are actually humans much like you and me.

If you put a suit on them and gave them a shave you'd hardly notice them walking down the street!



A 'Neanderthal' man

There are Malay tribes living today who have similar features to Neanderthal skulls but they are not part-human!

And as for living in caves—there are people today who live in caves as it is the best place in their environment. People in the Bible lived in caves at different times but they weren't part-animal. There are many cases of human beings choosing to live in caves even in modern times.

Sadly, it is also in more modern times that different groups of humans were once thought to be 'missing links' or only part-human, just like

Neanderthals were said to be, and this played a part in their bad treatment by some people. Australian Aboriginals and black Africans are two examples. Science now knows this is not true either. We are all closely related—through Adam, the Bible tells us.

We can see that scientists are always changing their minds, but the Bible's story of how we came to be stands solid. As new facts come to light they fit with the Bible story that has remained unchanged.

(Next issue Part II—'Missing Links' and Fossil evidence)

Word puzzle

Find all the underlined words in the puzzle below.

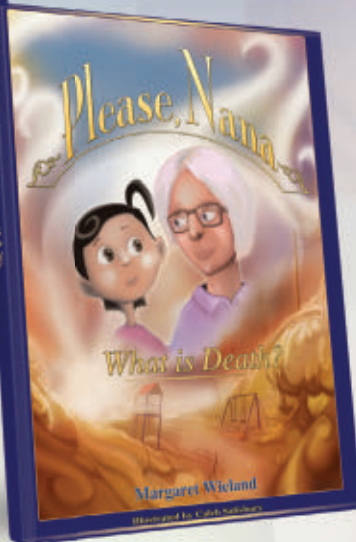
“then the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life: and man became a living being.” Genesis 2:7

H	B	D	O	R	G	O	D	B	M	A	N	O	H
O	E	U	F	B	N	A	T	H	E	E	T	G	O
F	C	T	H	E	L	O	R	D	F	I	N	T	O
O	A	H	G	M	M	H	S	I	T	I	N	O	F
R	M	E	A	A	E	A	L	T	V	L	S	G	R
M	E	N	D	N	B	N	N	I	R	L	I	F	E
E	B	E	C	A	M	E	L	I	V	I	N	G	D
D	B	R	E	A	T	H	I	A	N	L	L	F	E
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U	M	O	M	A	N	H	I	O	R	T	N	N	R
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Please, Nana

Who is God? & What is Death?



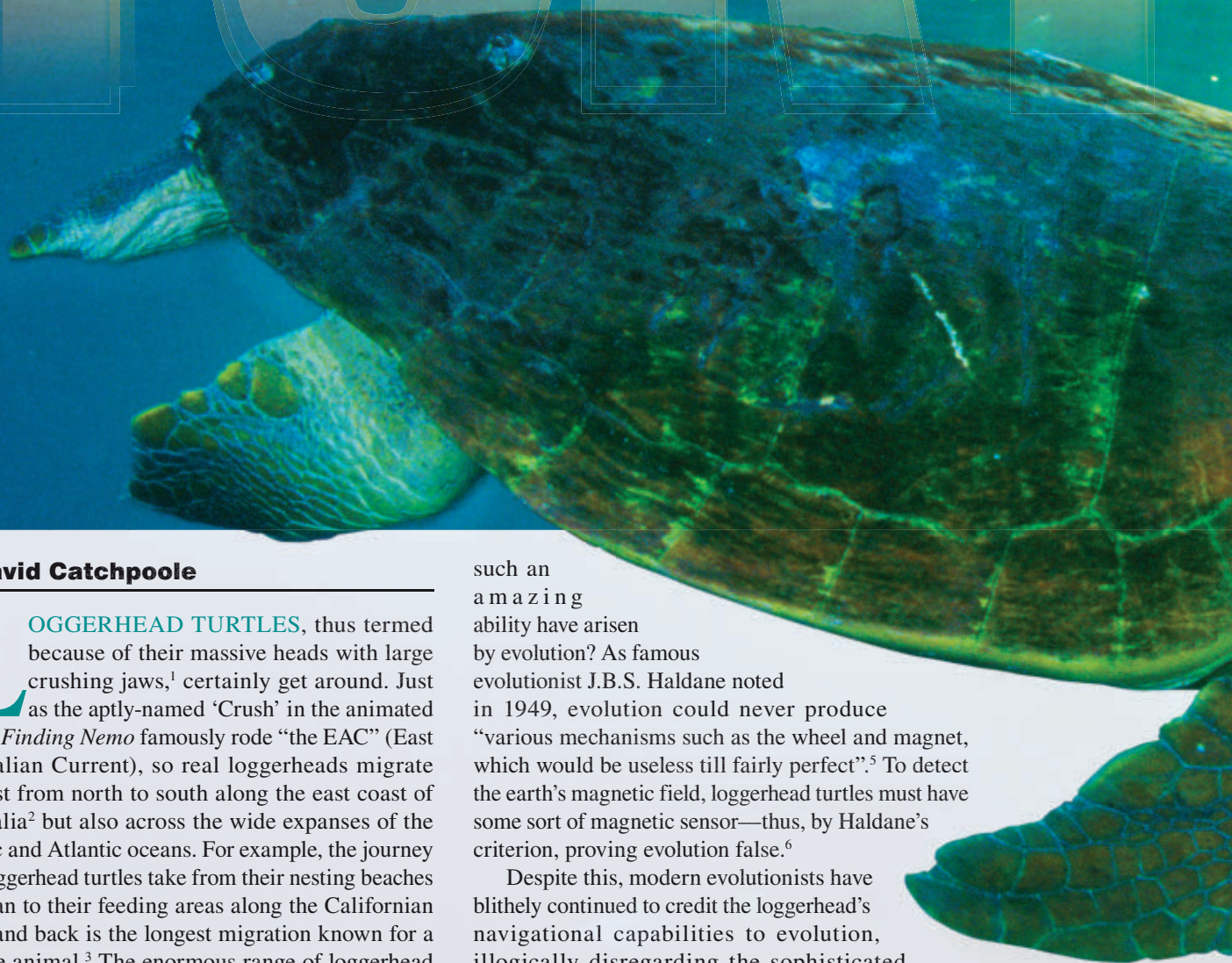
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TURT



David Catchpoole

LOGGERHEAD TURTLES, thus termed because of their massive heads with large crushing jaws,¹ certainly get around. Just as the aptly-named ‘Crush’ in the animated movie *Finding Nemo* famously rode “the EAC” (East Australian Current), so real loggerheads migrate not just from north to south along the east coast of Australia² but also across the wide expanses of the Pacific and Atlantic oceans. For example, the journey that loggerhead turtles take from their nesting beaches in Japan to their feeding areas along the Californian coast and back is the longest migration known for a marine animal.³ The enormous range of loggerhead turtles encompasses all but the most frigid waters of the world’s oceans. How are loggerheads able to navigate across thousands of kilometres of open ocean, all the way back to the very beach where they hatched, to lay their eggs?

For over a decade now, it has been known that loggerheads, even as hatchlings, can use the earth’s magnetic field to help them tell north from south and steer themselves along the right latitude.⁴ How could

such an amazing ability have arisen by evolution? As famous evolutionist J.B.S. Haldane noted in 1949, evolution could never produce “various mechanisms such as the wheel and magnet, which would be useless till fairly perfect”.⁵ To detect the earth’s magnetic field, loggerhead turtles must have some sort of magnetic sensor—thus, by Haldane’s criterion, proving evolution false.⁶

Despite this, modern evolutionists have blithely continued to credit the loggerhead’s navigational capabilities to evolution, illogically disregarding the sophisticated design required for magnetic field sensing. And now recent findings have caught evolutionists by surprise, as it has been

LES

at loggerheads with evolution



via Wikipedia.org

Newly hatched loggerheads are only about 5 cm (2 inches) long. They spend the first 7 to 12 years of their lives far out at sea, eventually returning to reproduce in the same area where they hatched.



Gary Bell/Oceanwideimages.com

The shell on the back of the turtle is called the carapace, while the shell on the belly side is called the plastron. Loggerheads are the largest of all hard-shelled turtles (cf. leatherbacks which are bigger but have soft shells), with adult males generally reaching about 90 cm (3 ft) in shell length and weighing about 110 kg (250 lb). However, some reports say that larger specimens over 450 kg (1,000 lb) have been found!

discovered that loggerheads' positional and directional sense is way better than expected—explaining it without a Creator just got a whole lot harder.

Loggerhead longitude long-shot

Notwithstanding loggerhead turtles' ability to use magnetic cues to determine latitude, it was widely believed that this wasn't possible for longitude, because of how little the earth's magnetic field varies in the east-west direction around the globe. (When you travel north or south away from the earth's magnetic poles, their pull weakens substantially. In contrast, when travelling straight east or west, the

intensity of the magnetic pull essentially doesn't change—only the *angle* of the magnetic pull changes, and that only to a very slight degree.) As Princeton University evolutionary biologist James L. Gould put it in 2008, regarding turtles and other migratory animals' uncanny ability to steer an accurate course: "A skeptic could reasonably believe that the latitudinal cue is magnetic, but that determining east-west position depends on magic."⁷

However, loggerheads have surprised evolutionists by demonstrating, "against reasonable expectation",⁷ that the turtles can clearly determine longitude.^{8,9} The researchers took turtles that had just hatched in Florida but had never been in the sea and put them in a pool surrounded by computer-controlled magnetic coil systems. The magnetic coils were set to reproduce the geomagnetic characteristics of two points on the loggerheads' trans-Atlantic migratory

route at identical latitude—one in the western Atlantic, near Puerto Rico, and the other in the east, near the Cape Verde islands. Turtles in the 'Puerto Rico' tank swam northeast, just as loggerheads in the wild do when setting off on their migration, riding the currents that circle the Sargasso Sea and loop around the Atlantic. In the 'Cape Verde' pool however, the loggerhead hatchlings headed northwest, as if returning on the homeward leg of their circular migratory route.

So, loggerheads can detect *both* the intensity (field strength) and the inclination (angle) of the earth's magnetic field to create "a mental map that covers all four points of the compass".¹⁰ Actually, it's more like a GPS¹¹ than a mere direction-finding compass. As University of North Carolina researcher Nathan Putman pointed out, "a compass doesn't really tell you where you are" whereas loggerheads' mental magnetic map "gives



Adult female loggerheads lay eggs in clutches of 100 to 150 eggs, burying them in dry sand. They do not hatch until about 60 days after being laid (during which time they might fall prey to wild pigs, raccoons, foxes or people—the eggs are very nutritious). After hatching underground, hatchlings dig their way up through the sand, waiting just beneath the surface until cooler temperatures signify nightfall. Then they pop out and scurry towards the ocean in a race against birds and other predators.

them positional information”.¹² I.e., “turtles determine longitudinal position by using pairings of intensity and inclination angle as an X, Y coordinate system.”

Putman adds that the findings might have a role to play in the development of human navigational technologies. “There may be situations where satellite might not be available, where this system of using two aspects of a magnetic field could be very useful,” he said.¹³

In one sense, one can appreciate evolutionists’ surprise at the loggerheads’ “astounding migrational abilities”¹⁰ in relation to longitude. After all, it took human navigators hundreds of years to figure out how to determine longitude in their long-distance voyages—even with the impetus of huge prizes offered by Spain, France and then Britain.¹⁴ (Eventually, John Harrison (1693-1776) with his chronometers won the most money—£23,065, equivalent to over £3.3 million today.)

Thus the ability to determine longitude, requiring such intense and directed human intelligence, would surely not be found in the “tiny brains”¹⁰ of loggerhead turtles—for surely such could not have arisen through evolutionary processes?

Indeed not—and therefore the fact that turtles *have* that capability points to its having originated from an intelligence *surpassing that of humans*, i.e. loggerheads have such features *by design*, not by evolution. In light of Romans 1:20 (those who deny the Creator are “without excuse”), one can see there’s a *reason* that turtles are at loggerheads with evolution. They were created to *thwart* evolutionary storytelling!

And it’s not just in relation to their design. There’s no joy for evolutionists in the fossil record, either.

Turtle fossils ‘all the way down’

As if there weren’t already enough paleontological and other challenges posed by turtles to evolutionary theory,¹⁵ the past decade has made it even more difficult to fit these singular creatures into an evolutionary ‘tree’. Many and varied have been the century-long attempts to explain the origin and phylogenetic relationships (which presume a common ancestry of all living things) of turtles. Traditional ideas have been up-ended by more recent morphological and molecular studies.¹⁶ But there is still no consensus—on the basis of comparisons of body form (morphology), evolutionists have variously claimed tuataras, lizards and snakes as turtles’ closest relatives, but molecular comparisons draw other evolutionists to favour crocodiles and birds as the “living sister group” of turtles.¹⁶

The recent discovery of a turtle fossil in Upper Triassic strata in China, presumed by evolutionists to be 220 million years old,¹⁷ has re-ignited another debate. Dubbed *Odontochelys semitestacea*, two reviewers (Tyler Lyson and Scott Gilbert) say the fossil “reopens the debate regarding the origin of the turtle shell”.¹⁸ This is the debate as to how the turtle’s carapace might have arisen in an evolutionary stepwise process from other parts of the turtle body over long periods of time. But, as evolutionists have admitted, “the turtle body plan is quite unique among vertebrates and is difficult to derive from a generalized pattern of the amniotes.”¹⁹ (Amniotes

= reptiles, birds, mammals.) And in the absence of definitive transitional fossils, such evolutionary speculation is exactly that—speculation!²⁰ Stasis is a feature of the turtle fossil record—turtles have always been turtles.²¹ The title of the paper by Lyson and Gilbert summed up the evolutionary conflict perfectly, *Turtles all the way down: loggerheads at the root of the chelonian tree*. This sentence from their closing paragraph is just as candid:

“The new discovery of the beautifully preserved fossil *O. semitestacea* produces more questions than it answers, reopening questions of turtle origins, shell evolution, and original paleoecology.”¹⁸

You can find a *correct* answer, based on *true* history, to the question of the origin of turtles, and the timing of the fossilization of the *O. semitestacea* turtle fossil, in the Bible. Turtles were created on Day 5 of Creation Week (see box p. 31) only about 6,000 years ago, and this fossil dates from the Flood of Noah’s day, about 4,500 years ago—a hugely violent, worldwide event. That’s why this and so many other fossils are, like it, “beautifully preserved”.¹⁸ But this explanation

only works for those who don’t want to “deliberately forget”—2 Peter 3:5–6. ■

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Loggerhead turtles can use their powerful jaws to crush prey like conches, crabs and other animals with hard shells. But they also eat softer foods such as jellyfish, seaweed and a brown alga called sargassum.

Loggerheads are no landlubbers

Loggerhead turtles (*Caretta caretta*) live in oceans all over the world, except in the most frigid waters. Having paddle-like flippers for swimming, and streamlined carapaces, loggerheads are renowned for their long-distance oceanic migrations (up to 4,800 km or 3,000 miles),¹ and pin-point accurate navigation. (Adult females often exhibit natal beach nesting, i.e. laying their eggs on the very same beach where they themselves hatched.)

Despite their evident aquatic prowess, evolutionists say these sea turtles are “limited by their land-dwelling ancestry”, as they must breathe air and nest on dry land.²

But a creationist perspective makes much more sense. Their need to breathe air is no impediment to them at all, being able to dive for up to 20 minutes, and even rest for hours without breathing. (In any case, loggerheads’ food is mostly found in the relatively shallow coastal waters, where their average dive is only three to four minutes.) Their ‘attachment’ to land during their lifetimes is minimal: no more than two months as eggs buried in sand, a few hours at most as hatchlings journeying from nest to sea, and a few hours again for adult females

when making landfall to lay eggs. So loggerheads are best viewed as sea creatures, created on Day 5 of Creation Week.

But some might ask, how could sea turtles have survived the global Flood of Noah’s day, with no dry land available for nesting, if they were not taken aboard the Ark? The answer lies in the fact that females only nest *every two to five years*. So, once the Flood waters went down, the surviving sea turtles could begin reproducing again. Female loggerheads lay up to five clutches of eggs in one nesting season, with up to 150 eggs per clutch—that’s a lot of turtles! Thus loggerhead populations could rapidly recover from Flood losses and from any interruptive effect of the Flood on reproductive cycles. Loggerheads attain mature size between 10 and 30 years of age, and reproductive life span after reaching maturity is estimated at about 32 years. So, it’s no problem for loggerheads to survive the Flood.

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IT'S SUPER-NATURAL



(NATURALLY)



WE ALL know about the law of gravity, don't we? It's what helps the moon slosh tides around the earth, stops galaxies from drifting apart, and holds your soup in the bowl.

We can express it in general terms as the force of attraction that exists between any two bodies, or we can get more specific and express it as an equation that includes the masses of the bodies, their distance apart, gravitational constants and such like, and then use that equation to help launch satellites and build bridges. The law of gravity is what we call a 'natural law', or a 'law of nature', because it is not derived from any theoretical proofs, but is simply the result of countless observations of what actually happens continually around us. That is, laws are descriptive, not prescriptive—they don't cause anything to happen but describe what happens, just as a map doesn't cause the outline of a coastline, but describes what exists.

However, we use the 'law of gravity' unthinkingly every time we serve a tennis ball or hang some washing on the line. No one has ever observed an exception to it—it is a *law*, unbroken and unchallenged at all times, in all places, and under all circumstances, far out in space or in our own bodies.

But it is not the only natural law. Most of us have at least heard of the laws of thermodynamics, the gas laws, the laws of electromagnetic induction, laws of chemical reaction, the law of biogenesis and many more. These are built into the fabric and operation of the universe by its amazing Designer. Some are expressed scientifically as theorems, such as Bernoulli's theorem that helps us understand how carburettors work.¹ These laws cannot be bypassed, and they are not suspended or modified in living things.

Who would want to bypass natural laws? Well, as it turns out, anyone who wants to try to explain the origin of the universe and of life without God must try to tell a story that bypasses at least one, and usually several, natural laws. It is interesting that such a person would insist that everything must be explained in terms of natural laws without supernatural intervention, when really this is self-refuting—it can't be done.

Let's look at some general cases

The origin of the universe is popularly believed to have happened in 'the big bang'. However, it is interesting to note that few serious cosmologists² will actually talk about the moment of the big bang, but will only talk about the moment *after* the big bang. The reason for this is that the theory actually calls for us to believe that everything in the universe suddenly appeared, not from a point, but from *nothing*. Otherwise it is not an explanation for the origin of anything at all. Many people don't realize that the point that everything supposedly expanded from in this theory has, itself, no explanation, because the idea defies the most basic natural law — the law of conservation of matter/energy: *matter/energy cannot be created nor destroyed*. Most other theories of the 'origin' of the universe assume something pre-existing.³ Thus only supernatural creation can account for the sudden appearance of this universe from 'nothing',⁴ and only supernatural creation can account for the fact that this natural law exists at all. Otherwise universes could just pop up at random any old time.

Atheistic attempts to explain the origin of life from lifeless chemicals collapse on natural law also. This is because the laws of chemical reaction govern the way substances combine chemically. Even if the often-quoted experiments by Miller, Urey and others demonstrated anything realistic about 'the early earth', the idea that the resulting amino acids would form proteins in the ocean or lakes and ponds defies these chemical laws.⁵ This is because the reaction forming a protein from amino acids gives water as

a by-product, but a chemical law dealing with concentrations of reactants makes the protein break down again if there is excess water around.^{6,7} Proteins therefore could never accumulate in these watery environments, certainly not long enough to accidentally form a living structure — no 'primordial soup' could give rise to life 'naturally'.

The laws of probability combined with these chemical laws also work against the idea that even one usable protein could form by accident. Each protein is a very specific arrangement of many amino acids⁸ not only in their order, but they must also be all 'left-handed'. No chemical law connects specific amino acids in any particular order, so their arrangement in any protein in a living thing is determined solely by carefully measured processes, like threading beads on a string to make a desired pattern rather than a random, unsatisfying jumble. Therefore only a Creator could have put amino acids into the order and configuration required for the proteins for the first living things. Natural law says that it could *not* happen 'naturally'.

Not only this, but there is the 'law of biogenesis'. This states that life comes only from life. Have you (or anyone you have ever heard of) ever seen any living thing that didn't have a 'mother'? You came from a mother, the vegetables you had for dinner grew from seeds, and the bacteria in your large bowel came from the division of other bacteria. There has never been any exception observed. The assumption that the law of biogenesis can be defied has no scientific support. Yet naturalists insist that life began by itself 'naturally', without a 'mother', and without God. How can this be?

Among many other natural laws we could examine, one of the most telling areas is that of information.⁹ Information theorems (easily discoverable natural laws) tell us unequivocally that information cannot arise from the action of



time and chance on matter. Information requires a mental source with not only intelligence, but also volition. Yet every cell of our bodies contains the equivalent of 1,000 books of information, packed in a density that cannot be exceeded because it is already at the molecular level. Where did it come from? It could only have been devised supernaturally.

But then, does the supernaturalist (creationist) have the same problem, since miracles also ‘violate natural law’? Not at all. Miracles are really *additions* to natural law.¹⁰ For example, Archimedes’ law of buoyancy states that the buoyant force of a fluid (i.e. liquid or gas) is equal and opposite to the weight of the displaced volume of this fluid. Thus if the object is denser than the fluid, the downward force of its weight will overbalance the upward force of its buoyancy, and it will sink. Some skeptics consequently assert that Jesus could not have walked on water because of this law.

However, does this mean that a helicopter rescuing someone from the sea also violates this law? No, the helicopter provides an *additional force* to the system of the person’s weight and

the sea’s buoyancy. Jesus as the Creator (John 1:1–3) likewise could have exerted an additional force.

Materialistic objections to miracles are therefore irrelevant, because, once God is admitted, the universe is not a closed system. His supernatural intervention is obviously necessary for creation and other ‘miracles’. Normally, though, God upholds His universe by natural laws like those we have discussed. In fact, it was the notion of a lawmaking God that led to the idea of natural laws in the first place—the birth of modern science.¹¹

The Bible says “For since the creation of the world [God’s] invisible attributes are clearly seen, being understood by *the things that are made*, even His eternal power and Godhead” (Romans 1:20). It is in “the things that are made” that we see the natural laws we have discussed in operation. Those who try to explain the universe without God are faced with the insurmountable problem that these laws, easily observable by theist and atheist alike, themselves deny any ‘natural’ explanation for the origin of the universe and life. They tell us unequivocally: our origins are supernatural, naturally. ■

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Here’s GOOD NEWS for the WORLD!

Creation Ministries International seeks to give glory and honour to God as Creator, and to affirm the truth of the biblical record of the real origin and history of the world and mankind.

Part of this real history is the bad news that the rebellion of the first man, Adam, against God’s command brought death, suffering, and separation from God into this world. We see the results all around us. All of Adam’s descendants are sinful from conception (Psalm 51:5) and have themselves entered into this rebellion (sin). They therefore cannot live with a holy God, but are condemned to separation from God. The Bible says that “all have sinned, and come short of the glory of God” (Romans 3:23) and that all are therefore subject to “everlasting destruction from the presence of the Lord and from the glory of His power” (2 Thessalonians 1:9).

But the good news is that God has done something about it. “For God so loved the world, that He gave His only-begotten Son, that whoever believes in Him should not perish, but have everlasting life” (John 3:16).

Jesus Christ the Creator, though totally sinless, suffered, on behalf of mankind, the penalty of mankind’s sin, which is death and separation from God. He did this to satisfy the righteous demands of the holiness and justice of God, His Father. Jesus was the perfect sacrifice; He died on a cross, but on the third day, He rose again, conquering death, so that all who truly believe

in Him, repent of their sin and trust in Him (rather than their own merit), are able to come back to God and live for eternity with their Creator.

Therefore: “He who believes on Him is not condemned, but he who does not believe is condemned already, because he has not believed in the name of the only-begotten Son of God” (John 3:18).

What a wonderful Saviour—and what a wonderful salvation in Christ our Creator!

If you want to know more of what the Bible says about how you can receive eternal life, please write or call the office nearest you ... see p. 2.

The so-called 'AGE OF DINOSAURS'

Why there never was a 'land before time' millions of years ago!

Calvin Smith

NO MATTER where *Creation Ministries International* speakers go, they are practically guaranteed to be asked about dinosaurs in question time. Both Christians and non-believers want to know how we can answer the evolutionary interpretation for the supposed 'Age of Dinosaurs', both from the Bible and science.

A classic evolutionary portrait of dinosaurs, such as above, typically depicts a group of them in a forest of exotic tropical-looking plants, with various reptilian creatures sprinkled about and a volcano erupting in the background. It gives the impression of a 'land before time' when dinosaurs ruled the earth.

Typically, a chart showing the geologic

column will be offered nearby (at right), showing the so-called ages of Earth's geologic history with the order and timing of when Earth's life forms supposedly appeared. Usually 'simple' organisms will be shown at the bottom, marine animals next, reptiles after that, dinosaurs appearing, then mammals and finally humans at the top.

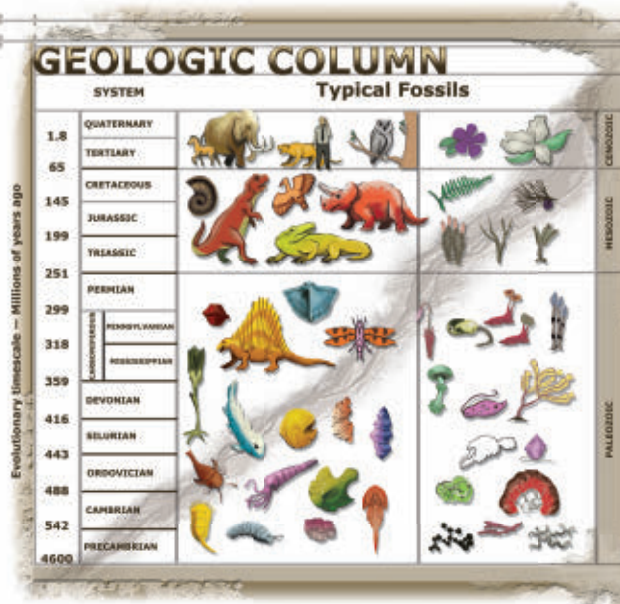
Many people get the impression that the remains of such creatures always appear in that order in the fossil record (with the understanding that there were millions of years of time separating the groups shown on the chart).

Many still think that mammals and dinosaurs, for example, never coexisted, or if they did it was only for a short period when only small shrew-like mammals were present.

However, the facts

show otherwise. Gradually, more and more evidence is being discovered that is consistent with what we know from the Bible, namely that dinosaurs and other creatures all lived and died at the same time.

To the surprise of many, ducks,¹ squirrels,² platypus,³ beaver⁴ and badger-like⁵ creatures have all been found in 'dinosaur-era' rock layers



along with bees, cockroaches, frogs and pine trees. Most people don't picture a *T. rex* walking along with a duck flying overhead, but that's what the so-called 'dino-era' fossils would prove!

A creature called *Gansus* was found, supposedly 120-million-years-old. Apart from a few features (like wing claws, still found on some modern birds) it looked very much like a modern duck or loon. But the standard dinosaur-age scenario is so entrenched, that one *National Geographic News* article declared:

"It may have looked like a duck and acted like a duck, but *Gansus* was no duck."⁶

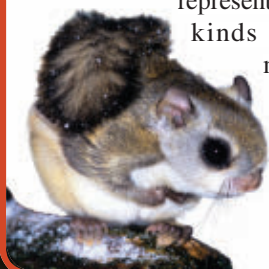
Being partial to 'farmer logic' myself, I feel that if it looks like a duck and acts (quacks, even?) like a duck, it most likely is some sort of duck!⁷

Many people are surprised when they hear of these creatures being buried together and wonder why they never heard of it before. Below is one evolutionary paleontologist's explanation.

"We find mammals in almost all of our [dinosaur dig] sites. These were not noticed years ago ... We have about 20,000 pounds of bentonite clay that has mammal fossils that we are trying to give away to some researcher. It's not that they are not important, it's just that you only live once and I specialized in something other than mammals. I specialize in reptiles and dinosaurs."⁸

Consider how many more tens of thousands of fossil mammals in 'dinosaur rock' are likely being similarly ignored in other parts of the world, with the likelihood of finding even more representatives of the same kinds as modern-day mammals.⁹

Interviewed in *Creation* magazine,¹⁰ Dr Carl Werner pointed out that



already over 432 mammal species have been identified in 'dinosaur rock', including nearly 100 complete mammal skeletons. Yet in his extensive travels to 60 museums across the world researching his documentary series, only a few dozen of these species were featured in displays, with not one complete skeleton.

As for the 'Age of Dinosaurs', another evolutionary paleontologist explains;

"In a sense, 'The Age of Dinosaurs' ... is a misnomer ... Mammals are just one such important group that lived with the dinosaurs, coexisted with the dinosaurs, and survived the dinosaurs."¹¹

So, what happened to the dinosaurs?

Evolutionary scientists have offered a variety of explanations for what they think happened to the dinosaurs. Here's a partial list:

- A large asteroid collided with our planet long ago.
- As a high-roughage plant group became extinct, the plant-eating ones died of chronic constipation, leading to the death of the carnivores dependent on them.
- They became addicted to plants with narcotic properties.
- The world's climate became either too hot, too cold, too dry or too wet.
- A supernova exploded nearby, showering the earth with radiation.
- Mammals ate their eggs.

There are serious problems with the evidence proposed for any of these events. Take the large asteroid impact theory, for example. Why would that event only wipe out the dinosaurs and not the ducks, squirrels, beavers, etc. that co-existed with them as mentioned above? Not to mention lizards and crocodiles, supposedly their close

cousins? Some evolutionists dispute the evidence of this impact as causing dino extinction¹² (cf. p.8). No one event that has been proposed by evolutionists can completely explain the evidence (which is why there are so many different ideas about what happened to dinosaurs).

Creationists suggest that most dinosaurs died and were buried in the great Flood described in Genesis 6–8 (for which there is a huge amount of evidence). Two of each kind were preserved on the Ark, of course, thus surviving the Flood.¹³ With their numbers greatly reduced, all animals would have been subject to many pressures, such as varying climates (including the Ice Age¹⁴) following the Flood. They may have had a unique physiology that made them less able to adapt as rapidly to the many different environments after the Flood. For example, evolutionists have suggested that dinosaurs may not have been warm-blooded *or* cold-blooded, but something completely different from either. They may have had a unique type of metabolism, unlike any living animals today.¹⁵

This may have contributed to them becoming extinct, along with the very same reasons animals become extinct today (being hunted, disease, climatic changes, habitat changes etc.).

Some dinos, at least, must have survived until relatively recent times—for example, evidence of UK dinosaur depictions from the 1400s,¹⁶ and a Cambodian stegosaurus carving centuries (but likely not millennia) old.¹⁷ This is completely unacceptable to 'old-Earth' believers, of course, who insist that the last dinosaur died out 65 million years ago, way before people arrived.

But there is other evidence, too, that literally shouts that the dinosaur fossils cannot be millions of years old—the discovery of soft tissue, including not just stretchy ligaments with identifiable proteins, but flexible transparent



branching blood vessels, containing an ooze that could be squeezed out like toothpaste. And inside these vessels were the easily identifiable remains of red blood cells, even showing the nuclei,¹⁸ typical of reptiles (cf. pp.13–14).

When you put all of the evidence together, dinosaurs are no problem for a Christian worldview. God made them, along with the rest of His creation, around 6,000 years ago. We find their fossilized bones alongside those of other animals because of the great Flood around 4,500 years ago. They lived after the Flood but gradually died out (like so many other species have).

There is no ‘huge mystery’ about the existence and extinction of dinosaurs when viewed from the perspective of God’s Word. The Bible actually provides a better explanation for these things than does the evolutionary view. ■

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13. See creation.com/dinos-on-ark.
14. See creation.com/ice-age-q&a.
15. See www.blm.gov/ak/st/en/res/education/akdino/dino_warm_or_cold_blooded.html.
16. See creation.com/brass_behemoth.
17. See creation.com/angkor-stegosaur.
18. See creation.com/still-soft-and-stretchy.

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PESTICIDE RESISTANCE



David Catchpoole

REPEATEDLY WE are told that the buildup of resistance to pesticides in populations of insects, rodents and other pests is evidence of evolution.¹

Creation skeptics claim that such pesticide-induced changes are “all that is required to produce the diversity of all living things from a common ancestor”.²

However, closer scrutiny of this phenomenon shows otherwise.

Rapid resistance

When researchers exposed the nematode (roundworm) *Caenorhabditis elegans* to the widely used nematicide levamisole, they reported that resistance to that pesticide “accumulated within very few generations”.³ The researchers explained that this rapid adaptation was likely due to the “standing genetic variation” of the nematode population, i.e. that the genes conferring resistance were *already present* in the population, but at low frequency. Exposing the nematodes to levamisole selected for the resistant individuals, “providing a direct demonstration of the **speed** of this process” (emphasis added). There are numerous other examples of similarly rapid adaptation in the scientific literature.⁴

Evolutionists are often needlessly surprised at the speed with which

populations can adapt, because they see such changes as ‘evolution’, which is associated with vast ages and slow processes.⁵ Such changes are rapid, but they are not evolutionary—i.e., relevant to evolution’s core claim that primordial microbes changed into people and all other living things.

The nematode researchers were simply observing the consequences of a human-imposed selection process (the same principles are at work with ‘natural’ selection—i.e. it culls existing genes, and does not generate new ones). Yet they were victims of their evolutionary mindset. Despite not having observed any evolution whatsoever (i.e. the sorts of changes that would supposedly be capable of turning pond scum into pesticide scientists), they peppered their scientific paper with claims about rapid ‘evolution’.

But their results demonstrated no such thing. Rapid rise in resistance to pesticides—yes; but evolution, no, as individuals with the genetic makeup conferring nematicide resistance were already in the population.

The price of resistance

Even where mechanisms of pesticide resistance are truly ‘new’, arising by mutation (random genetic mistakes, supposedly the raw material for evolution), research has shown they come at a cost referred to as ‘fitness cost’. Resistance genes are said to “alter some

components of the basic physiology and interfere with fitness-related life history traits”.⁶ A famous example is that of warfarin resistance in rats, first detected in the late 1950s.⁷ Rats resistant to that poison have a higher requirement for vitamin K than normal rats (more than 10 times!).⁸ So warfarin-resistant rats suffer from blood clotting disorders—in fact, many die from internal bleeding. Thus, resistant individuals are generally less fit. Their proportions were seen to decline in Britain when no longer exposed to the rodenticide. The genetic makeup conferring warfarin resistance in rats only helps them survive when the pesticide is present—when absent, they survive less readily.

That ‘fitness cost’ phenomenon occurs in insect pests, too. Researchers monitoring *Culex pipiens* mosquitoes⁹ overwintering in a cave in southern France (in an area where organophosphate insecticides are widely used) noted a decline in the overall proportion of insecticide-resistant mosquitoes as the winter progressed, indicating “a large fitness cost”.⁶ How? Organophosphates hamper the proper function of certain enzymes (proteins) called esterases, thus killing the insect. But the resistance genes “induce an overproduction of esterase”.⁶ Because this requires extra energy and resources, it’s not surprising that these resistant bugs will normally be worse off than the others—except when the pesticide is present.^{10,11}

IS NOT EVOLUTION!

Pest management programs: using creationist principles

In practice, pesticide advisers¹⁵ at the pest control frontline, though they might naively still accept evolution as true, mostly operate as if with a creationist perspective.

A key strategy to combat loss of pesticide effectiveness is *rotation*.¹⁶

That is, alternating the use of pesticides with different *modes of action*—affecting different essential functions of the pest, e.g. respiration, nerve transmission, etc. Thus, when resistance to, say, an organophosphate insecticide is beginning to build up in the population, the farmer switches to, say, a pyrethroid insecticide. Then, as resistance builds up to that, he switches to one with a different mode of action again, if legally available (e.g. a carbamate). This relies on the ‘fitness cost’ (see main text) of the resistance genes to reduce their frequency as a particular pesticide is withdrawn—which highlights the fact that these genes

hamper the organism overall, the very opposite of what is required for real evolution.

There have been instances where ‘multiple resistance’ has developed—the worst-case scenario for farmers. However, analysis of each example shows the same sorts of non-evolutionary mechanisms with damaged genes, etc. And here, too, when pesticides are withheld for a period, non-resistant individuals generally come to dominate the population once more. Thus effective pesticide rotation strategies can begin again.

‘Evolution’ in the real sense of goo to you via the zoo, is nowhere in evidence in any of this. Rather, all we are seeing is variation within a kind, and information going downhill. Thus the dogma that chemicals turned into microbes which turned into people has no practical relevance to real (operational) science or farming practice.

Such overproduction is “due to either gene amplification or gene regulation”.⁶ Note that having additional copies of existing genes or having genes that fail to switch off (regulate) production is not evidence for evolution, because to change microbes into microbiologists, evolution needs a mechanism for *adding new complex functions*, not copying existing ones or breaking a genetic switch.

Similar overproduction of proteins which metabolize DDT has occurred in DDT-resistant strains of *Anopheles* mosquitoes.^{12,13}

In line with the Bible

In all of the above examples, we don’t see any genes for complex new functions evolving, that is, appearing *de novo*. Instead we see either ‘amplification’

(additional copies) of existing genes or, more usually, a loss-of-control over regulation of genes. In other words, the mechanisms for pesticide resistance are not from new genes but from *existing genes*—often from *damaged* versions of these. There has been no increase in meaningful genetic information and often a *loss* of information.

Evolutionists love to portray the development of pesticide resistance as a grim ‘arms race’, giving the impression that pests are evolving new features all the time. But as we’ve seen, this is misleading. An arms race implies that the defending forces are inventing new weapons, but the processes of selection and mutation operating in pests facing a pesticide are *not* inventing *new* weapons. Rather, the struggle is better likened to

trench warfare,¹⁴ where the defending forces will destroy their own bridge, or blow up their own road, to impede the enemy’s advance.

Thus evolution’s ‘icon’, pesticide resistance, actually gives no support to molecules-to-man evolution whatsoever. It is, however, right in line with the Bible’s account of an originally “very good” creation (Genesis 1:31) now in “bondage to decay” (Romans 8:19–22) as a consequence of the Fall (Genesis 3). Pesticide resistance is *not* evolution. ■

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of the phrase repeated ten times, ‘and God said’...’.³ Indeed, God’s creative activity is precisely described using the verbs ‘created’ ‘made’, ‘said’, ‘called’, ‘set’, ‘formed’, ‘caused’, ‘took’, ‘planted’, and ‘blessed’. Furthermore, these activities are described from start to finish, and spread out over a period of six days. In other words, the Genesis account describes exactly how God created, the order in which He created, and the timing of His creative acts—and was understood that way by the New Testament writers.⁴ If, on the other hand, all the author intended to communicate was that ‘God is the creator of everything’, then surely the first verse would have been enough.

Likewise, Bill Arnold claims: “The important lesson from Genesis 1 is that [God] did in fact create it, and that he made it orderly and good in every respect.” He adds: “If it were important to know how long it took God to create the world, the Bible would have made it clear.”⁵ Yet the creation account explicitly says that God took six days. Day One was followed by a second, then third, fourth, fifth and sixth days, when the creation was completed (Genesis 2:1–2). Exodus 20:11 confirms that God created “in six days”. What could be clearer?⁶

There is no doubt, of course, that Genesis makes a fundamental theological contribution, but to say that Genesis is primarily theological rather than historical is to set up a false dichotomy; history and theology are *not* mutually exclusive. “The fact is that the whole Bible presents its message as theology within a framework of history.”⁷ E.g. the Resurrection of Jesus is a foundational theological doctrine, but would be worthless unless it happened in history (1 Corinthians 15).

In any case, the Bible author’s intent and purpose for writing is surely expressed in the text itself. How else can a reader know the author’s intention apart from what the author actually states in the text? Otherwise, the meaning of the text would have to be discovered first, before there could be any hope of determining the author’s intent. Suggestions of intent and purpose which are not directly derived from

COMMON ERRORS

MADE BY DENIERS OF A YOUNG EARTH

■ Andrew Kulikovsky

SINCE THE rise of uniformitarian geology in about 1800, many in the church have capitulated to this new ‘science’. Thus they have rejected the traditional plain historical-grammatical interpretation of the creation and Flood accounts. They routinely resort to erroneous reasoning to support their compromising reinterpretation. Following are discussions of the three most common errors committed.

Appealing to the ‘purpose’ of the text

Old-earthers often appeal to the ‘purpose’ of the creation account, commonly claiming that it is primarily theological rather than historical. For example, Bruce Waltke, citing Charles

Hummel, argues that Genesis 1–2 is not a purely descriptive account answering the ‘what?’ ‘how?’ and ‘what is?’ Instead, it is prescriptive in that it answers the ‘who?’ ‘why?’ and ‘what ought to be?’.¹ Thus, the Genesis account of creation and the Fall discusses general theological concerns rather than describing actual historical events. Similarly, Bernard Ramm states that Scripture “tells us emphatically *that* God created, but is silent as to *how* God created It informs us that the stars, and the flowers, and the animals, and the trees, and man are creatures of God, but how God produced them is nowhere a matter of clear affirmation in Scripture [emphasis in original].”²

However, such a view simply does not align with what the Scriptures actually state. As Walter Kaiser responds, “[this is] an obvious slighting



Frederick I, Holy Roman Emperor as crusader, holding an orb, representing the earth, with a cross on top symbolizing Christ's overlordship. Miniature from a manuscript from 1188, Vatican Library.

the text itself can only come from the interpreter's imagination. Therefore, ascribing an intent and purpose which is not directly derived from the text is to subordinate Scripture to the imagination of the interpreter.

Demand for conformity to current scientific views

Old-earthers also demand that any interpretation must be consistent with currently accepted 'scientific' views.

However, old-earthers are themselves selective and inconsistent in their demand for scientific conformity. Although quick to chastise biblical (young-earth) creationists for advocating interpretations of the Genesis accounts of creation and the Flood that seem to go against current scientific views, many have no problem accepting literal interpretations of the virgin birth, Christ's miracles, and the Resurrection—all of which seem to go against current scientific views! Take Christ's miracle of turning water into wine (John 2:1–11) as an example of their inconsistency. Very few, if any, old-earthers who claim to be evangelicals

with a high view of Scripture would doubt that Christ literally and miraculously turned water into wine. Yet, this act is scientifically impossible! Water simply does not have the carbon atoms that wine does. Even if we were to supply these in the form of sugar and yeast, the process of fermentation takes time (several weeks), yet the text indicates that this all occurred instantaneously. Why, then, do such old-earthers not reinterpret this (and other) accounts? Why accept some supernatural acts of God and not others?

Historical revisionism

It is difficult to find worse examples of the rewriting of history than that done by many old-earth evangelicals with respect to the historical views of the Church concerning the creation account.⁸ These

erroneous historical views have been refuted in detail elsewhere.⁹ The plain young-earth reading of the creation account has been the traditional mainstream view of the Church throughout its history up until the ascendancy of 'enlightenment' thinking in the 18th Century.¹⁰ As David Hall laments:

"The record of history is abundantly clear on this; yet, it is like extracting molars to convince some theologians to surrender an opinion that is in conflict with actual history. One has to question the tenacious resistance, especially when it is confronted with so much factual information. Why, I asked, would fine and godly theologians fight against history with so much energy when the case against it was so clear?"¹¹

Other examples of historical revisionism by old-earth evangelicals include the Church's alleged treatment of Columbus and Galileo. Old-earthers claim that these 'scientists' were right but the dogmatic Church was wrong, and we should be careful not to make the same mistakes today.

Such conclusions are based on a common belief that before he made his historic voyage in 1492, Christopher Columbus appeared before a crowd of dogmatic theologians and ignorant inquisitors, all of whom believed that Scripture taught the earth was flat. Columbus then set out to prove them all wrong and sailed around the globe. While it is true that there was a meeting at Salamanca in 1491, this common understanding of what happened does not contain a shred of truth. Historian Jeffrey Burton Russell identifies Washington Irving (1783–1859), a noted American historical fiction writer, as one of the primary sources of this 'folktale'.¹² Irving created a fictitious account of a nonexistent university council and let his imagination run wild.¹³ The whole story is "misleading and mischievous nonsense."¹⁴ Russell has demonstrated that with very few exceptions, from the 3rd century BC onwards, all educated people in the western world believed the earth was a globe. It is thus no accident that medieval kings were presented with an *orb* (sphere), representing the earth, as a symbol of their power (see picture, left).

Likewise, it is commonly believed that Galileo's observations and arguments offered overwhelming support for Copernicus' theory (that the earth orbited the sun), but the stubborn, dogmatic, ignorant theologians in the Catholic Church wanted to silence Galileo lest their interpretation of Scripture be shown to be in error. This was for fear it would nullify the Church's claim as the authority in biblical interpretation. But as Thomas Schirrmacher has demonstrated: "The depiction of the process against Galileo as a heroic scientist standing up against the narrow-minded dogmatism of the Christian church is based entirely on myth, not on historical research."^{15,16}

The disagreements between scientists and theologians at the time reflected not a conflict between Christianity and science, but a conflict between Aristotelian philosophy and science.¹⁷ Galileo was a scientist who was convinced of the truth and accuracy of Scripture. He was well regarded by

the Church and his first defence of the Copernican system, *Letters on Sunspots* (1613), was well received and no criticism was raised. Indeed, Cardinal Barberini, who later became Pope Urban VIII and who would sentence him in 1633, was among those to congratulate Galileo on his publication.¹⁸ Thus, Galileo's greatest enemies were not in the church but rather among his colleagues and fellow scientists, most of whom denied the Copernican system,¹⁹ and who were afraid of losing their position and influence.²⁰ De Santillana writes: "It has been known for a long time that a major part of the church's intellectuals were on the side of Galileo, while the clearest opposition to him came from secular ideas."²¹

The irony in all of this is that it is the old-earth believers who need to learn the lesson of the Galileo affair.²² Galileo came to the right conclusion while believing totally in the Bible's accuracy, whereas his fellow scientists came to the wrong conclusion based on the current scientific consensus (Aristotelianism)! The Church has been painted as an enemy of science, when, in actual fact, Galileo's scientific peers and colleagues were the greater enemies of true science.

Conclusion

Don't let those who deny the plain reading of the creation account get away with raising these kinds of fallacious arguments. If you hear people raise such arguments, challenge them to justify their position, and point out—gently—their errors of fact and logic. ■

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IN HIS symphonic suite *The Planets*, Gustav Holst titled the 5th movement “Saturn, the Bringer of Old Age”. In human terms, a few thousand years would be pretty old, but secular scientists claim the planet is much older—about 4.5 billion years. Cassini, the spacecraft that has been orbiting Saturn since 2004, is making that age hard to believe. Independent lines of evidence argue for a much younger age.

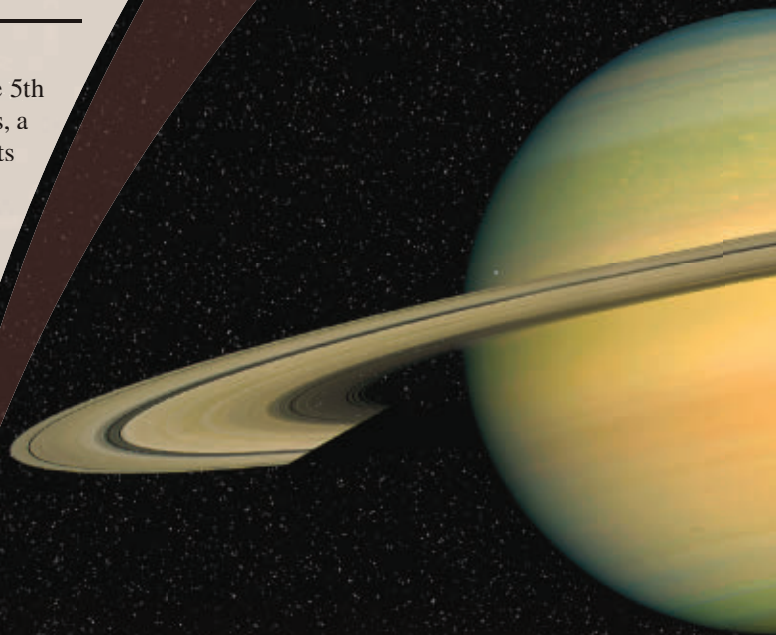
Cassini-Huygens¹ is the most advanced outer-planet spacecraft ever launched. In the 14 years I worked on the mission, I had opportunity to hear firsthand the struggles the world’s leading planetary scientists were having trying to keep Saturn old. I heard the predictions before launch, and I monitored the realities as torrents of data came in from Saturn, its moons and rings. Here is a short list of phenomena that put strong upper limits on the age of the Saturn system.

Enceladus. As reported in the June 2009 issue of this magazine, Enceladus emerged in 2005 as a serious challenge to old-age claims. This little moon, about the diameter of Arizona, was erupting water ice, dust and gas out of its south pole in powerful geysers. In March 2011, the problem got more and more difficult for long-agers: the heat emitted from Enceladus was measured at 15.8 gigawatts—ten times higher than earlier estimates.² Papers in 2007 and 2008 admitted there is no known combination of factors that can keep this activity going for billions of years.³ The eruptions on Enceladus are indeed fountains of youth.

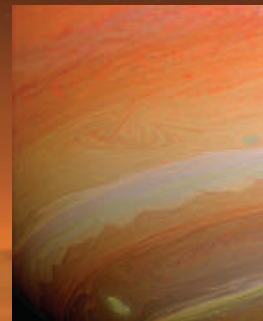
Main Rings. Saturn’s rings are not the placid, smooth raceways they appear to be. They are dynamic! The rings are constantly being bombarded by the solar wind, sunlight pressure, gas drag, internal collisions and micrometeorites. Scientists have even heard ‘ring tones’ in radio frequencies coming from meteorite impacts,⁴ and the visible ‘spokes’ may be their signatures. Yet the ice is remarkably clean compared to the predicted contamination from billions of years of micrometeorite pollution.⁵ And scientists recently found the trail of a billion-ton comet that must have hit the rings in the 1980s.⁶ How rare was that?

Scientists have struggled to keep the rings old by suggesting that the ice gets recycled somehow, or that the rings are more massive than they appear (this only prolongs the life of the B ring, the densest one).⁷ Most ring scientists, however, are resigned to the fact that the rings look young.^{5,7} To maintain their faith in billions of years, some propose that the rings formed long after Saturn by some lucky accident.⁸ Such an *ad hoc* explanation would require highly implausible conditions.

Faint Rings. In addition to the visible rings, Saturn has 1) a tenuous F ring continually plowed by Prometheus, one



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Young Saturn

of the shepherd moons, 2) some fragile arcs in the G ring,⁹ 3) a newly-discovered Phoebe ring orbiting Saturn backwards¹⁰ and 4) the tenuous E ring, created by the 10% of particles that escape Enceladus.¹¹ On approach to Saturn, an ‘explosion’ in the E ring was detected (probably from Enceladus),¹² dissipating as much mass as all the ring’s micron-sized particles combined in just four months.¹³ How often does this occur? If not rare, it represents a dynamic, destructive process. None of these delicate rings seem likely to persist for even a tiny fraction of the lifetime of the main rings—and the main rings already look young.

Saturn. Saturn has incredibly strong lightning storms, aurorae, a phenomenal vortex at its south pole that could almost swallow Earth,¹⁴ and a bizarre hexagon-shaped pattern of clouds at the north pole.¹⁵ Saturn’s magnetic field, furthermore, defies evolutionary dynamo theories by aligning nearly perfectly with its spin axis. The magnetosphere was even found to be loaded with charged particles from the Enceladus geysers, which in turn affects the field’s rotation.¹⁶ It’s remarkable that such a tiny moon has produced a measurable affect on a planet with 5 million times more mass—talk about the tail wagging the dog!

Iapetus. The Texas-sized moon Iapetus is as black as charcoal on its leading hemisphere, and as white as snow on the trailing side. This difference in brightness (albedo), noted by discoverer Jean-Dominique Cassini in 1672, left Voyager scientists still mystified in 1981. The mystery was finally solved by the Cassini mission, but what a solution! Close-encounter photos taken in September 2007 showed that the dark material almost certainly came from outside the moon; but even more astonishing, there’s a runaway migration of bright carbon dioxide ice due to heat absorbed by the dark material around it. This irreversible process causes the carbon dioxide ‘dry ice’ to sublime and ‘hop’ to the trailing side and from pole to pole.¹⁷ About 12% of the migrating ice is lost to space each 29.5-year Saturnian orbit.¹⁸ Even if Iapetus started with a layer five kilometres (three miles) thick, it would be gone in just a third of the assumed 4.5 billion-year age of the solar system.

Another puzzle on Iapetus is a mountain range circling most of the equator that rises, at some points, 19 km (12 miles) above the surrounding plains. Trying to explain that in evolutionary terms requires an improbably rapid spin-down of Iapetus,¹⁹ or maybe a ring that collapsed. Rhea, a similar-size moon, shows scars on its equator that might be from ring collapse,²⁰ but nothing as massive as the mountains on Iapetus.

Titan atmosphere. Like Earth, Saturn’s moon Titan has a largely nitrogen atmosphere, but unlike Earth, it has a large component of methane (what we call ‘natural gas’ on Earth). This methane provides Titan with a ‘space blanket’ that keeps the nitrogen in a gaseous form. But the methane in Titan’s atmosphere is irreversibly lost to space and to the surface. Since Voyager, atmospheric scientists have known that the solar wind is eroding the methane, converting it to hazes and

other compounds that cannot change back to methane. When that erosion depletes the methane to a critical level, the entire nitrogen atmosphere should freeze out and collapse onto the surface catastrophically. Clearly, this has not happened. Atmospheric scientists have given Titan's methane an upper age limit of 10 million years.²¹

Titan surface. The solar wind ionizes atmospheric methane, causing it to recombine into other hydrocarbons, primarily ethane (C₂H₆). The ethane, which is liquid at Titan temperatures, should have rained down and accumulated over 4.5 billion years into a global ocean several kilometres thick, according to calculations made in the 1980s.²² The Huygens probe, however, landed in January 2005 with a thud on a moist lakebed. The historic landing provided 'ground truth' that the old-age predictions were wrong.

The project orbiter and lander found Titan girdled with dunes of dirty ice particles, riddled with river channels, but only scarred with half a dozen craters—astonishing for a large moon. Lakes were found in the north and south polar regions, but the largest one in the south was recently caught evaporating quickly,

now that Saturn is moving from equinox to solstice.²³ Cloudbursts of methane witnessed last year show weather cycles that have not left evidence of billions of years of hydrocarbon deposits.

These and other evidences put strong *upper limits* on the age of the Saturn system. Many of them top out at 100 million years, 10 million years, or less. That does not mean that Saturn *is* that old—it could be much younger, including the biblical timescale of thousands of years. To illustrate the problem for evolutionists, sometimes at presentations I have an assistant help me stretch out a 45-foot rope in front of the audience. If the rope represents the 4.5 billion year age of the solar system 100 million years is just one foot on that rope. What happened to the other 44 feet on the timeline? Did it even exist?

Bible-believers cannot prove from this evidence that Saturn fits within a Genesis timeframe, but consider: falsifying the 4.5 billion year age has the effect of simultaneously falsifying Darwinian evolution and the 'geological timescale'. And with that comes a whole new set of questions—questions best addressed by the position of intelligent design, and best answered by the Word of the Creator Himself. ■


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NUCLEAR PHYSICIST

embraces biblical creation

Dr Jonathan Sarfati chats with *Dr Jim Mason, Nuclear Physicist*

DR JIM MASON has a B.Sc. in Engineering Physics from Queen's University, Kingston, Ontario, Canada, and a Ph.D. in Experimental Nuclear Physics from McMaster University, Hamilton, Ontario, Canada. He had a 37-year engineering and management career in defence electronics developing ASW (anti-submarine warfare) systems and land tactical C4 (computerized command, control, communications) systems. This included the positions of Vice President and Engineering and Chief Technology Officer for one of Canada's leading defence electronics system integration companies and being a member of that company's Executive Committee. Dr Mason's hobbies include skiing (downhill and cross-country), gardening/landscaping, home renovating and spending time with his two grandchildren. He and his wife Rosemary have three children and reside just outside Lakefield, Ontario near their two granddaughters.

Biblical Christianity: the perfect logical system

Recently during a ministry tour of Canada, I had the pleasure of travelling with Dr Jim Mason, CMI-Canada's newest speaker. I was interested to find out that he didn't become a Christian till he was almost 40. So why would a logical scientist accept something that the world largely mocks?

"I have become increasingly amazed at how comprehensive and yet internally consistent the Bible and Christianity are. I spent most of my working career as a System Engineer developing complex and sophisticated defence electronic systems. Consequently, I have come to think of the Bible and Christianity as the perfect system."

Dr Mason compares biblical Christianity with the Apollo system that sent men to the moon and returned them safely: this included everything that was required, and didn't have anything unnecessary to its goal. The same is true of biblical Christianity. "However", Jim says, "the Apollo system, being man-made, was not perfect as amply

demonstrated by the near catastrophe of the Apollo 13 mission. Conversely, the Bible/Christianity is perfect, having been crafted by God."

And as Dr Mason later realised, a vital foundation to this system is the first 11 chapters of Genesis:

"Without these chapters being taken as historical narrative and plainly understood as written, the rest of the Bible and, in particular, the New Testament message of salvation, does not compute. It's like the Saturn V rocket of the Apollo system. Without it, achieving the mission is impossible. Thanks, in part, to the excellent material on the CMI website, I came to realize that such an interpretation is well-supported scientifically, including in my own area of nuclear physics."

But if Genesis is foundational, then how can evolution and long ages be reconciled to the Bible? Jim realised that it *couldn't*:

"It destroys the Gospel by destroying its foundation. Adam and Eve disappear, original sin disappears, death through sin disappears, the need for a Saviour disappears and indeed, in the end,



“evolutionists would have us believe ...
that only the airplanes, buildings and
computers had to have a designer.

Who are they kidding?”

salvation and eternal life disappear.”

Furthermore, “evolution is at odds with the Bible everywhere”:

“The Big Bang says nothing created everything, versus the Bible that teaches that everything was created by the Word of God; the earth, sun, moon and stars formed by gradual accretion over billions of years rather than in a few days by the Word of God; life occurring by accident rather than by holy fiat; humans evolving over millions of years from an ape-like ancestor rather than being created in the image of God in a single day; death being an essential part of the world from the start rather than being an unintended but necessary consequence of mankind’s original sin.”

Real science supports the Bible

So, what areas of Dr Mason’s own expertise support the biblical creation model and oppose the secular evolutionary one? Jim points to the building blocks of nature and their economy of design, something that impressed the great creationist founder of electromagnetism, James Clerk Maxwell (1831–1879), who wrote:

“No theory of evolution can be formed to account for the similarity of molecules, for evolution necessarily implies continuous change.... The exact equality of each molecule to all others of the same kind gives it ... the essential character of a manufactured article, and precludes the idea of its being eternal

and self-existent.”¹

Modern science *strengthens* this argument, as Jim explains:

“Elementary particle physics tells us there are only 3 fundamental particles, each occurring in a few variants resulting in a total of only 24 elementary particles. Everything in the entire universe is made from and held together by these 24 particles.”

Yet from just these 24 basic building blocks, “There are 118 chemical elements which can be combined to create almost innumerable compounds like iron oxide, calcium carbonate and amino acids; and these can be combined to create almost innumerable substances like bubble gum, proteins and concrete; and these can be combined to create even grander structures like buildings and airplanes and computers and even the human body. That sure looks like design at its best.”

“Yet the evolutionists would have us believe that these 24 particles just happened by accident and then just happened to accidentally combine into particles that then just happened to combine into the elements, that then just happened to combine into a few compounds that then just happened to combine into a cell that then just happened to evolve into some humans and that only the airplanes, buildings and computers had to have a designer. Who are they kidding?”

Furthermore, he explains that only 12 of these particles provide 3 of the 4 forces that hold everything in the

universe together, “design at its best”:

“These are the *strong nuclear force* that holds atomic nuclei together, the *weak nuclear force* that enables some types of radioactivity and the *electromagnetic force* which is responsible for just about every phenomenon we experience on a daily basis. The fourth, and weakest force, is *gravity*. These forces cover an incredible range of strengths and all behave differently: gravity only attracts; the electromagnetic force both attracts and repels; both act over infinitely long distances whereas the strong force only acts within the nucleus. Gravity, the weakest force, accounts for the motion of the stars and planets; the electromagnetic force accounts for light travelling from the stars to Earth. Finally, the strong force keeps all the nuclei in atoms from flying apart due to the electromagnetic repulsion between the protons.

“But that is not all. The relationship between these forces is so finely tuned that even a slight change in just one of these relationships would render the universe as we know it impossible. An accident? I don’t think so!”

Radiometric dating

Probably the strongest ‘evidence’ for the long ages required by evolution is right in Dr Mason’s field of expertise: radiometric dating. But he explained that it doesn’t actually measure age at all. Rather, it measures the ratio of the radioactive ‘parent’ element to the stable ‘daughter’ element in, say, a sample of rock today. And the age must be *inferred* by using these measurements in a calculation, and this relies on several unverifiable *assumptions*; e.g.:

“that there was no daughter element present when the rock was formed—i.e. the daughter element is entirely due to decay of the parent in the sample; that no amount of either parent or daughter has leached into or out of the rock since its formation; and that decay rate has not changed over time. If any of these assumptions are incorrect, it can dramatically change the calculation of the age. Since it is impossible to know for sure whether any of these have happened, it is not reasonable to trust the calculated age as accurate.”

Carbon dating points to a young age!

Jim Mason

Radioactive ^{14}C is continually being formed in the atmosphere, and makes up about a trillionth of all carbon atoms on Earth. Because it is biologically almost indistinguishable from non-radioactive carbon (^{12}C), it is absorbed by plants during photosynthesis and then by animals eating the plants and other animals eating the animals that eat the plants and, of course, by humans when we eat our burgers and broccoli. When the plant or animal dies, it stops absorbing carbon and the ^{14}C decays without being replaced, thus changing the ratio of ^{14}C to ^{12}C in the dead plant/animal over time. Using very sensitive instruments, the current ratio in a sample of the dead plant/animal can be measured and used (along with the known rate of decay of ^{14}C and the assumption that the ratio of ^{14}C to ^{12}C in the atmosphere has always been the same as today) to calculate an age for the specimen. However, after about 90,000 years of decay, there is so little ^{14}C left that even today's very sensitive instruments cannot detect it.

Coal

Numerous samples of coal from different seams in different parts of the US have been found to contain substantial amounts of ^{14}C , even though, according to the evolutionary time scale, the samples are allegedly between 37 million and 318 million years old. What's more, the amount of ^{14}C found is of the order of 100 times the sensitivity of the instruments, so it is not simply a minor measurement blip. Some people try to dismiss this as contamination of the sample during processing, but the laboratories that do these measurements have developed sophisticated procedures to make sure that this does not happen. Interestingly, despite the supposed wide range in ages, the age calculated from the ^{14}C measurements for all the coal samples is very similar—about 50,000 years. This is still appreciably larger than the biblical age. However, it is reasonable to assume that the amount of ^{14}C in the atmosphere at creation was zero rather than the same as today, that it would take time for it to increase to today's level, and that the disruption of the Flood would cause other drastic changes to this ratio. Incorporating these things into the calculations can easily bring the computed age in line with the biblical age.³

Diamonds

Carbon-14 in diamonds is another example of a young age measurement in substances that are 'supposed to be' very old. Diamond is the hardest substance on earth, because it's an extremely rigidly-packed crystal of carbon. Therefore it's impervious to the alleged possible contamination that has been used to try to dismiss the results for coal, although unreasonably. Yet ^{14}C has been found in diamonds at essentially the same level as in the coal samples even though the diamonds are allegedly 1 to 3 billion years old.⁴



Dr Mason points out:

"In cases where the actual age of the rock is known, radiometric dating techniques typically give wildly erroneous ages. For example, rock formed in a lava flow from Mt. St. Helens in 1986 was radiometrically dated as 2.6 million years old! If, every time you read a newspaper report concerning an incident about which you had first-hand knowledge, you found that the newspaper report was totally wrong, how many of these would you read before you began to suspect that all the reporting was wrong?"

Furthermore, he shows that the long-agers' favourite dating method, carbon dating, supports a much younger age. That's because radioactive carbon is so short-lived it should not be present in anything over 100,000 years old, yet it is found in coal and diamonds allegedly many millions of years old (see his explanation in the box above).

Further evidence for a young age from nuclear physics comes from large amounts of helium found in tiny zircon crystals extracted from rocks that are allegedly 1.5 billion years old. The

amount of uranium and lead present in the crystals indicated that the helium was the result of radioactive decay of the uranium. However, in the supposed 1.5 billion years of the rock's existence, essentially all the helium that would have been produced by this decay should have diffused out of the crystals. Using the amount of helium actually present in the crystals and the rate of diffusion of helium through these crystals as measured by an independent laboratory, the age of the crystals, and therefore the rock from which they came was only about $5,700 \pm 2,000$ years! This implies that the decay rate was much faster in the past—undermining a key assumption of radiometric dating.²

Encouragement

It should be very encouraging for scientifically-minded young people in church homes to see that real scientists like Dr Mason can embrace biblical creation. So did he have any advice for students thinking of studying science?

"Go for it! Science—that is operational science, how the world

works—is fascinating stuff—and it is operational science that has provided all the technological and medical advances that make our present age so wonderful. However, be careful not to confuse the facts of operational science with the musings of origins science—that is the materialistic speculations about how things came to be. Don't be afraid to ask, 'Why do you say that?' or 'How do you know?' about anything and everything. Truth will stand up to hard questions and deep digging!" ■

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JELLYFISH JUDGMENT

■ David Catchpoole

AT SCHOOLS and universities, students are taught that jellyfish are ‘primitive’ creatures way down the evolutionary ‘tree’. Unlike ‘more advanced’ marine creatures such as fish, jellyfish do not appear to be powerful swimmers. Lacking a backbone, their pumping action is slow and their forward movement often barely perceptible.

But is that a fair assessment?

Two recent studies of what jellyfish¹ can do put things in a completely different light.

Unlocking the ‘secrets’ of jellyfish pumps

Medical researchers say jellyfish have just what they’re looking for.²

“Most pumps are made of rigid materials,” says California Institute of Technology researcher Janna Nawroth. “For medical pumps inside the human body, we need flexible pumps because they move fluids in a much gentler way that does not destroy tissues and cells.”

According to Nawroth and her co-researchers, jellyfish undulations

“hold secrets” that may make possible vastly improved miniature pumps for medical applications and soft robotics. They have carefully studied the flows and eddies created by the pumping action of jellyfish, particularly a characteristic measure known as the *Reynolds Number*.³

“We’re very lucky,” said Nawroth. “The Reynolds numbers we see in the movement of jellyfish of different sizes and ages are in the right range as what we need for medical applications.”

There have been other insights too. For example, at a micro scale, jellyfish exploit the narrow layer of water adhering to their surface as they move—i.e., they “use it as [an] additional paddle at no extra cost.” What’s more, there is “a clever arrangement” of multiple pacemakers within the jellyfish body which fine-tune the pumping mechanism.

The researchers plan to use this new-found “practical understanding” of jellyfish movement to help design a range of flexible pumps for medical applications.

How comb jellyfish sneak up on prey

The comb jellyfish *Mnemiopsis leidyi* consumes vast quantities of copepod plankton (often referred to as zooplankton).

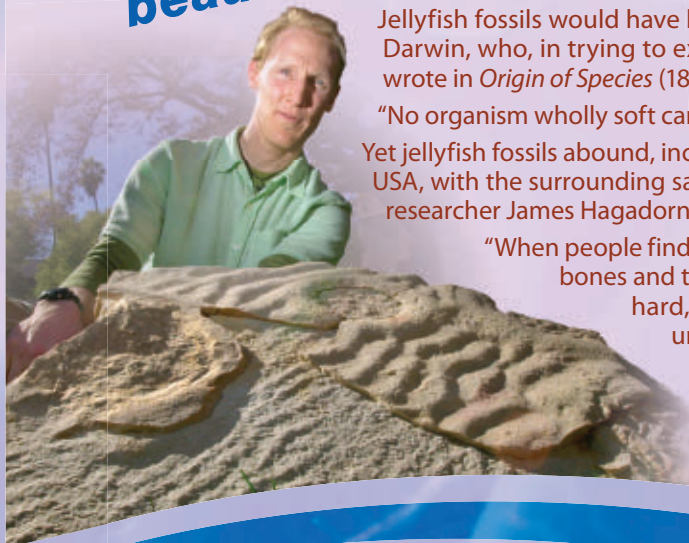
But copepod plankton are renowned for their sensitivity to predator movements in the water, and their rapid escape response. Just how comb jellyfish can catch the predator-wary copepods has presented something of a puzzle, as the University of Gothenburg’s Lars Johan Hansson explains:

“Copepods have a well-developed ability to detect even the slightest water disturbance. They can swim well clear of the source of water deformation in just a split second.”⁴

So how can the comb jellyfish so successfully make itself “hydrodynamically invisible” to its prey?

Hansson and his co-researchers used advanced video technology to study the water deformation generated by jellyfish movements compared to the water disturbance needed to trigger the

Lots of jellyfish fossils, beautifully preserved



Jellyfish fossils would have been a colossal surprise to Charles Darwin, who, in trying to explain the lack of intermediate fossils, wrote in *Origin of Species* (1859):

“No organism wholly soft can be preserved.”⁷

Yet jellyfish fossils abound, including these examples in sandstone from Wisconsin, USA, with the surrounding sand ripple marks also beautifully preserved. Evolutionist researcher James Hagadorn (pictured) mused:

“When people find a T-rex, that doesn’t excite me that much, because a T-rex has bones and teeth—really easy to fossilize. But to preserve a jellyfish, that’s hard, because it has no hard parts. Something is there we don’t understand.”⁸

From an evolutionary perspective, Darwin’s and Hagadorn’s comments are understandable. But jellyfish fossilization speaks not of the slow-and-gradual processes mooted by evolutionary theory, but of *rapid* burial. And that, coupled with the *worldwide* distribution of fossils, is consistent with their having been buried in the global Flood of Noah’s day, around 4,500 years ago.⁹

Image credit: AP Photo / Reed Saxon

copepod’s escape response.⁵ They found that the comb jellyfish uses microscopic hairlike cilia inside its oral lobes to produce the gentlest of currents, transporting water between the lobes.

“As the water accelerates slowly and is transported undisturbed into the jellyfish together with the prey, there is nothing that alarms the prey until it is next to the capture site inside the lobes, by which time it’s too late to escape,” explained Hansson.⁴

Making a right judgment about jellyfish

Reporting on the comb jellyfish research, *Science Daily* wrote:

“Despite its primitive structure, the North American comb jellyfish can sneak up on its prey like a high-tech stealth submarine, making it a successful predator.”⁴

But to claim something is both “high-tech” and yet ‘primitive’ is surely illogical. The only basis for labelling the jellyfish as ‘primitive’ is the evolutionary story about its origins—one that time and again doesn’t mesh with reality. We’ve seen how medical pump designers recognize the *clever arrangement* and *design* in jellyfish pumping mechanisms

and that such design is worth copying.

Design does not come about by accident, it needs a *Designer*—and the Bible tells us who that is.⁶ It’s the One who will come again (Hebrews 9:28) to judge the living and the dead (1 Peter 4:5). He is also the One who sent a watery judgment upon the whole earth—which is why we find beautifully preserved jellyfish fossils. (Darwin was wrong about *that*, too—see above.) ■

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SLAVERY AND 'ONE'

Carl Wieland

IT IS often assumed that slavery in the antebellum¹ USA was driven by white vs black racism. In fact, it was, if anything, the other way around—it was slavery that exacerbated racism.

First, the evidence indicates that throughout history, people enslaved others whenever they had the means and opportunity, regardless of their 'race'. Black people were captured by other black people for sale to non-African markets. Huge numbers of 'white' Europeans were enslaved by both whites and non-whites. The word 'slave' itself comes from one of those heavily enslaved white races, the Slavs. In fact, the Barbary coast pirates of North Africa had such a thriving and entrenched white slave trade in the early 1800s that it caused the US to send military forces into battle there, inspiring the famous Marine Hymn line, 'To the Shores of Tripoli'.

As late as 2001, black Africans were still being kept and traded as slaves in the Sudan.² Unfortunately, the silence from the 'politically correct' media on this open scandal has been deafening—perhaps because the perpetrators were other black Africans, or maybe because many were followers of the 'religion of peace'.

Second, support for slavery's role in heightening racism comes from comparing the different social outcomes in the US and Brazil. In the US during

the era of slavery, there was an emphasis that was largely lacking in Brazil: that all people, being descended from Adam, are created in God's image. It means they are all intrinsically equal, *one human family*, despite all the variety and cultural differences, as the Declaration of Independence said. So in the US, there was a pressure to concoct schemes to make the enslaved group less human—but not in Brazil. This is one important reason why, after slavery was abolished, Brazil had far fewer social problems involving black-white racism than the US.

It also explains why such biblically untenable (though allegedly biblical) notions as 'pre-Adamite races',³ and 'the curse of Ham led to black skin'⁴ arose and/or were prevalent in the white culture of the USA, yet not that of Brazil.⁵ In a society with more biblical leanings, the anti-racist and anti-slavery implications of the straightforward history of humanity in Genesis had to be neutralized. Like today's theistic evolution compromises, these ideas were not driven by what the Bible said, but by the outside ideas prevalent in the society, which were then read *into* the Bible.

One drop of blood: black or white?

Related to this is another interesting 'racial' difference in comparing Brazil and the US. In several Western societies, one is regarded as 'black' (or in Australia,

Aboriginal) even if the majority contribution to one's ancestry was 'white'. In the slavery era in the US, this was known as the 'one-drop rule'. At the time, it implied inferiority, with the 'lower' group's 'blood' regarded as if it were a 'contaminant'.⁶

This rule was enshrined in law in Virginia's 1924 Racial Integrity Act, passed on the same day as the state's evolution-inspired eugenics act to sterilize people by force. If a white person married someone who had even 'one drop' of African 'blood' (ancestry), their marriage was a criminal offence.

Given the lack of pressure in Brazil to relegate blacks to an inferior status to justify their enslavement, it's no surprise that in Brazil the one-drop rule does not work that way at all. In fact, it almost applies in reverse. According to Jose Neinstein, executive director of the Brazilian-American Cultural Institute, for people living in the US, "If you are not quite white, then you are black". But in his native country of Brazil, "If you are not quite black, then you are white."⁷ Many Brazilians who regard themselves as white back home find that when they come to the US, people see them in the opposite way.

All of which only goes to show the arbitrary and culturally determined nature of many of our notions of race and skin colour. What a difference it

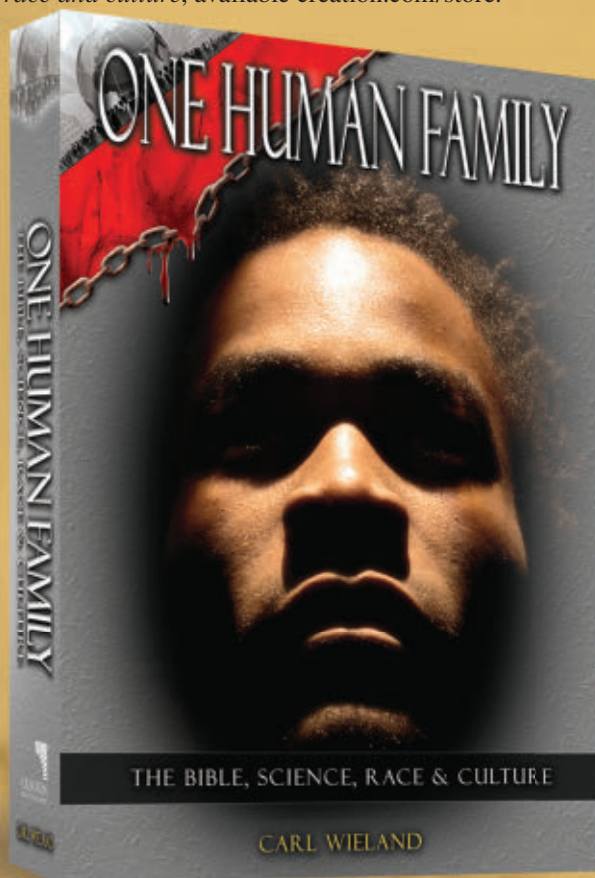
DROP OF BLOOD

could make, both to racist ideas and to the ‘politically correct’ overreactions to them, to fully grasp hold of the implications of Genesis. We are not only all related, but astonishingly closely related. We all go back to Adam and Eve—and even more recently than that, to Noah and his family. We really are *one human family*. ■

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Rodhocetus

and other stories of whale evolution



■ Don Batten

ASKED FOR a good example of transitional fossils showing evolution, many evolutionists put forward whales. Museums and textbooks show pictures of creatures that supposedly show the evolution of whales from a land animal.

Key to this story is a fossil of a creature called *Rodhocetus*, which is portrayed as the first creature with legs changing into flippers and with the tail developing into a whale's tail. Without it there is really no story, but recent disclosures undo the tale.¹

Dr Philip Gingerich, who found

the fossil, promoted the idea that *Rodhocetus* had a whale's tail. The fossil is on display at the University of Michigan, but Dr Carl Werner noted that the part that would show the presence of the flukes (the rear wings) is missing.¹ He asked about the missing tail bones and how they knew it had tail flukes. Dr Gingerich replied,

"I speculated that it might have had a fluke ... I now doubt that *Rodhocetus* would have had a fluked tail."²

And the legs becoming flippers?

Dr Werner noted on inspecting the fossil of *Rodhocetus* the absence of any

foot/flipper bones. When he asked Dr Gingerich how he knew that the animal had flippers, Dr Gingerich said,

"Since then we have found the forelimbs, the hands, and the front arms of *Rodhocetus*, and we understand that it doesn't have the kind of arms that can spread out like flippers on a whale."²

So *Rodhocetus* had neither a tail fluke nor flippers, according to its discoverer. But don't hold your breath waiting for the museums to change their displays or the textbooks to stop portraying *Rodhocetus* as a neat transitional form. A picture is worth a thousand words, and like the fraudulent embryo drawings of Haeckel, they will be reluctant to let this one go.

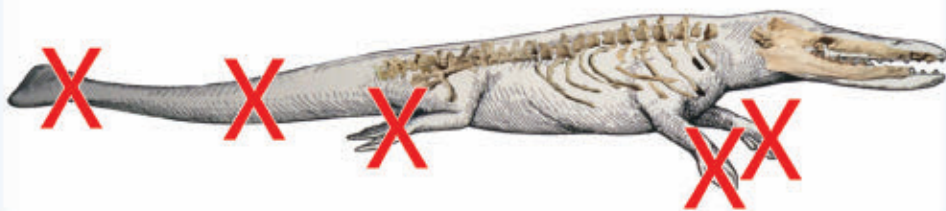


Figure 1. *Rodhocetus* at the Museum of Natural History, University of Michigan, USA. Fossil evidence overlaid on the museum's illustration from Dr Carl Werner, *Evolution the Grand Experiment Vol. 1* DVD. Red Xs added to emphasize the imagination involved in the illustration.

Problems plus!

There are many other problems with whale evolution.³ Museums and textbooks portray the fossil story as being clear-cut, yet evolutionists cannot even agree on which land animal gave rise to the whales. Based on fossil similarities of teeth, some paleontologists favoured hyena-like animals (*Pachyaena*), while others preferred a cat-like animal (*Sinonyx*). But after recent comparisons of DNA, molecular biologists decided hippos were the closest to a whale ancestor!

There are, of course, huge problems in converting a hippo-like creature into a whale. Not even the teeth are

similar: hippos' teeth are flat and rasp-like, good for grinding up vegetation, whereas the toothed whales have pointed, sharp teeth, used now for

catching fish and other swimming animals.

It's all a whale of a tale. ■

References and notes

1. Werner, C., *Evolution: the Grand Experiment*, Vol. 1, New Leaf Press, pp. 139–143.
2. *Evolution: the Grand Experiment* Vol. 1, DVD; interview by Dr Werner on August 28, 2001.
3. See *Refuting Evolution*, ch. 5, 2007.



For an astonishing exposé of this and many other aspects of evolutionary storytelling, we highly recommend Dr Carl Werner's book and DVD, *Evolution the Grand Experiment*, Vol. 1, available at creation.com/store.

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BEEES OUTSMART SUPERCOMPUTERS



 Carl Wieland

ONE OF the most fiendishly complex mathematical computations is the so-called ‘Travelling Salesman Problem’. Given a list of locations (e.g. cities) and the distances between them, it involves finding the shortest possible route in which each location is visited only once. As the number of locations increases past anything more than a handful, the complexity of the problem increases dramatically, to staggering proportions.

Such computations “keep supercomputers busy for days”, says Professor Lars Chittka, from the University of London.¹ Yet scientists from that university, using artificial computer-generated flowers, have found that bees learn to solve such problems, in effect, and extremely quickly.² They

are the first animals found capable of this—and they solve it for *hundreds* of locations.

Chittka says that bees are able “to link hundreds of flowers in a way that minimises travel distance, and then reliably find their way home—not a trivial feat if you have a brain the size of a pinhead!” Using artificial computer-controlled flowers, the researchers found that bees can do this “even if they discover the flowers in a different order”.

Dr Mathieu Lihoreau, the co-author of the study, says this shows that, despite a limited number of nerve cells in their brains, bees obviously have “advanced cognitive capacities”. The researchers express the hope that one day it might be possible to understand how such amazing processing feats are achieved with such apparently minimal ‘hardware’.

But if the best computer hardware engineers and software programmers have yet to design a supercomputer that can match the bee’s “advanced” *computative performance*, let alone one with the *space efficiency* of a bee’s brain, what does that say about the bee’s designer? One doesn’t need to be good at mathematical computations to work *that* one out (Romans 1:20). ■

References and notes

1. Tiny brained bees solve a complex mathematical problem, Queen Mary—University of London, www.qmul.ac.uk, 25 October 2010.
2. Lihoreau, M., Chittka, L., and Raine, N., Travel optimization by foraging bumblebees through readjustments of traplines after discovery of new feeding locations, *The American Naturalist* 176(6):744–757, 2010.



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